



FFT SEED AND SEEDLING MANAGEMENT POLICY (interim)

Scope

This policy covers the collection, processing, and storage of seed and the ordering and distribution of seedlings for Forests for Tomorrow-funded reforestation purposes.

1. Introduction

The primary objective of Forests for Tomorrow (FFT) Program is to improve the long-term timber supply through the establishment of new forests on areas impacted by the mountain pine beetle (MPB) and catastrophic fires outside licensee and BC Timber Sales basic reforestation obligations¹. Seed and seedling planning is recognized as vital components of FFT's reforestation activities, and, as such, they are identified as a potential program risk² and policy matter of importance³. FFT-funded silviculture operations will contribute to achieving diverse mixes of desirable tree species within FFT treatment units, subject to applicable site management objectives, site limitations, and considerations of economic return (**FFT policy #1**). The use of genetically desirable suitable seedlings is also one of the program's nine guiding principles⁴ (**FFT Principle 5**. Species diversification and utilizing genetically desirable seedlings are reforestation and restoration objectives).

As FFT reforestation activities escalate, significant quantities of seed (wild collections and orchard seed), associated tree seed services, seedlings and seedling services will be required to meet these needs. This FFT Seed and Seedling Strategy provides an overarching plan for guiding the planning, procurement, and use of seed and seedlings under FFT.

2. Purpose and Objectives

The purpose of this Ministry of Forests and Range (MFR) FFT Seed and Seedling Policy is to ensure that FFT's reforestation goals and objectives can be met in an efficient and timely manner.

The objectives of this policy are to:

¹ Forest for Tomorrow Program Management Plan, June 15, 2005, p. 5

² Ibid., p. 16

³ Ibid., p. 35

⁴ Ibid., p. 14



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- ensure that an adequate supply of suitable seed and seedlings is available for FFT.
- guide persons in the procurement and use of seed and seedlings for FFT
- ensure seed selection and use is consistent with the FFT principles and *Forest and Range Practices Act* (FRPA) regulations and standards
- optimize the use of select seed used for FFT.
- track, monitor and report seed and seedling use under FFT.
- guide FFT funding used for seed- and seedling-related projects. Provide accountability for FFT funds used for seed and seedling-related projects.
- Promote partnerships and best available information with regard to seed and seedling planning, acquisition, selection, and use.

Considerations, procedures and roles and responsibilities for meeting these objectives are described in the following sections.

3. Overview of key tasks and timelines:

The production and delivery of high quality seedlings requires that certain tasks are completed within specific timeframes. The following timelines are suggested to ensure sufficient time to sow, grow and accept high quality seedlings in time for the desired planting season. Requests made outside of these timeframes are possible but should be done with the knowledge that they may increase the risk of not procuring desired amounts or quality of seedlings.

Seedling Sowing Requests (assumes 1 + 0 stock)

Mid-September: sowing requests due for “early sow” species (Yc, Pw, Bl, Bn) and upcoming fiscal year summer and fall planting

Mid-October: early sowing requests due for spring planting

December 1: Late sowing requests due for spring planting (FFT bulk request date)

Acceptance of Nursery Overruns

Mid-November: pre-lift overrun approvals entry into Nursery Shipping and Administration system (NSA)

End of January: final overrun approvals entry into NSA

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End of February: completion of seedling trades and sales. Any remaining overruns revert to nurseries for private sales.

4. Roles and responsibilities:

Seed Planning

FFT does not have legal reforestation obligations and operating areas are not defined as they are for BC Timber Sales (BCTS) and major tenure holders. As such, the ministry will undertake strategic FFT seed planning and acquisitions.

Regional FFT staff will assess seed need requirements for known and potential FFT areas using survey information, mountain pine beetle (MPB) inventory information, and projected harvest and rehabilitation projections. Assumptions regarding species and stocking, and seed transfer limits will be used to estimate the seed needs for broad management areas over the next several years.

Tree Improvement Branch

- pursue the development of land-based spatially enabled methods and standards to increase seed planning accuracy and efficiency.
- adjust FFT seed needs and inventories accordingly as better information becomes available, and as seed inventories change, .
- develop and implement provincial MPB seed needs analyses, and GRM strategies
- provide guidance and decision support to regional FFT staff /recipients in seed planning FFT activities
- responsible for program level seed use administration, including tracking and invoicing of FFT funds
- liaise with the Forest Genetics Council, and other agencies, as required
- support the development of new GRM / Seed inventories for planning, analysis and operational seed use
- register seed in accordance with the Chief Forester's Standard for Seed Use.

FFT Contact:

- compare the projected seed needs with the existing seed inventory and projected seed orchard production.

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- initiate and coordinate cone collections or seed purchases using FFT funds in accordance with Section 4 (below) if insufficient seed for a species or area is identified.

Seed Collections, procurement, and ownership

Seed acquired using FFT funds is owned by the FFT program

FFT Contact/Recipient

- acquire seed in the following order:
 1. existing inventories owned by FFT (RSI = MoF 27, RNI = MoF 28)
 2. existing inventories owned by operations division (MoF 01),
 3. seed declared surplus by MFR (e.g. MoF 20), licensees and BCTS
 4. seed orchards (MFR and private)
 5. superior provenance seed collections
 6. wild stand seed collections .
- initiate and coordinate cone collections
- authorize cone collections under authority of FRPA s 52, when necessary
- make application for registration of seed collected as per the Chief Forester Standards for Seed Use
- identify on Seed Planning and Registry system (SPAR) seed obtained using FFT funds with the following ownership codes:
 - Southern Interior Region (RSI) = MOF 27
 - Northern Interior Region (RNI) = MOF 28
- Seed acquired using FFT funds, may be traded or sold to other programs, with funds recovered by the FFT program.

Tree Seed Centre (TSC)

- track and provide forecasts and expenditures related to FFT (ministry and licensee administered programs) seed sales / purchases and cone-seed service requests and report findings to Forest Practices Branch (FPB).
- prepare invoices or journal vouchers to recover revenue for TIB and Operations Division seed sales and TSC cone and seed services on a quarterly basis

FPB

- Report seed cost forecasts and expenditures related to FFT seed sales/purchases and cone-seed services to FFT contacts.

Seed processing and storage

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TSC

- register, test, and store FFT funded seed collections in accordance with the Chief Forester's Standards for Seed Use.
- process and prepare FFT seed collections and requests as per TSC procedures and standards.

Ordering seedlings:

Seedlings ordered using FFT funds are owned by the FFT program. Administration of the seedling production process must ensure, through demonstrated past performance and experience, a high level of seedling handling proficiency, seedling supply security, and quality assurance. If variance from the following steps is undertaken the points in those parts of the steps being omitted must be covered off by one of the other responsible parties under that heading.

FPB

- establishes sowing request budget cap based on projected need and available funding
- consolidates future sowing requests and funding requirement forecasts received from FFT contacts

TSC

- track FFT seed procurement and purchase
- invoice and assist in journal voucher preparation for seed purchases against MoF 20

Nursery Services (NS)

- set sowing request deadlines and advise FFT contact.
- tenders seedling contracts to nurseries.

FFT contact

- consolidates future sowing request and funding requirements from recipients



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- coordinates with recipient the amount of allowable sowing based on sowing budget cap
- ensure that recipients are aware of sowing request deadlines
- run ad-hoc SPAR reports to ensure these requests are entered
- discuss any significant variance in stock type selection with recipient.
- provide NS with forecasts of sowing request volumes

Recipient

- forecasts future sowing requests and funding required (including transportation and storage)
- coordinates with FFT contact the amount of allowable sowing based on the sowing budget cap
- enters sowing requests in SPAR by deadlines
- wherever possible, bulk requests should be entered
- use the funding source code "FTM".
- ensures that all sown seedlings are tied to a suitable and available landbase.
- ensures that prescriptions that require associated sowing are appropriate and accurate in regards to numbers and species required.
- ensures that all seedlots sown, and used, for a particular treatment area, are consistent with the seed transfer guidelines and Chief Foresters Standards for Seed Use.
- develop, where possible, an inventory of potential planting areas in order to accept surplus seedlings

Seedling Supply Management:

NS

- develops seedling contract standards, and manages the contracts throughout the growing cycle. This includes sampling and quality assurance.
- advises FFT contact of any significant problems with seedling quality or quantity.
- Advises FFT contact of options available under seedling production contract agreement.

FFT contact

- monitors seedling inventories
- accompany NS on nursery visits to review a selection of sowing requests, especially where problems are identified.
- discuss seedling quality and quantity issues with NS and recipient

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- discusses results of nursery visit with recipient, advises recipient and NS on mitigation decisions.
- confirm changes to seedling specifications with NS

Recipient

- communicate any issues to FFT contact, and works with the FFT contact to resolve these issues.
- discuss seedling quality and quantity issues with FFT contact
- monitor seedling inventories throughout growing cycle
- informs and confirms with FFT contact of any significant changes to seedling specifications

Seedling lifting and transport*to cold storage(spring stock) or hot-lift to planting site(summer stock):***NS**

- update NSA with pre-lift seedling inventory estimates and pesticide applications
- perform audits at nurseries during the lift phase
- arrange for cold storage space and transport
- monitor frozen stock quality throughout the winter
- advise FFT contact or recipient of pre-lift final approval deadlines
- advise FFT contact or recipient of procedures for overrun approvals and allocation and sale of surplus seedlings
- establish procedures for ordering summer stock from cold storage and hot-lift summer stock as well as procedures on field handling and storage

FFT contact

- keep informed on overrun approval deadlines
- ensure recipient is aware of seedling overrun approval procedures and monitor this through ad-hoc reports
- ensure recipient is aware of procedures for allocation and sale of surplus seedlings
- ensure recipient is aware of and adheres to stock ordering and handling procedures

Recipient

- enter overrun pre-lift and post lift acceptances in NSA by deadlines
- advise FFT contact of significant overruns or underruns
- advise FFT contact of any significant seedling quality issues



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- be responsible for re-allocation of surplus seedlings, and prepare seedling sales contracts.
- ensure that a copy of each seedling sale contract is sent to FPB
- Follows seedling ordering procedures see attachments #.... – ordering form cold storage; ordering summer hot-lift seedlings)
- ensure activity contractors follow seedling ordering, transport and field storage procedures (see attachments #.... – seedling transport guidelines; field storage of summer hot-lift seedlings etc.)
- ensure applicable planting standards are followed by activity contractors

5. Surplus Seedlings

Reallocation of surplus seedlings

Surplus seedlings may be reallocated to other MFR funded reforestation programs where there is a shortage of seedlings

- Re-allocation priority will be:
 1. Within the FFT program
 2. Within Ministry programs across funding sources through the seedling purchase process
 3. To non-Ministry programs

FFT Contact

- discuss the issue of available seedlings and seedling needs with other FFT contacts.
- approve the reallocation of surplus seedlings and communicates sales to NS and suppliers

Recipient

- determine the availability of surplus seedlings
- recommend to the FFT contact the re-distribution or sale of surplus seedlings.
- coordinate the re-allocations, trades, and sale of all seedlings.
- arrange for transport and cold storage of purchases or trades
- be responsible for all costs related to seedlings sown and grown in contravention of this policy or associated standards.

Sale of Surplus Seedlings

FPB

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- bill, receive payment, and process accounts for the sale of surplus seedlings

Recipient

- issue seedling sale contracts
- forward copy of seedling sale contract to FPB

6. Suggested training for recipients and/or activity contractors:

Recipients' and regional FFT contact must have the required level of knowledge, or acquire training, in the following areas:

- Seed Planning and Registry system (SPAR)
- Chief Forester standards on seed use/seed transfer guidelines
- Chief Forester policy on species diversity
- Stock type selection – field and nursery considerations
- Nursery shipping and administration system
- Plant Wizard
- Stock shipping and handling guidelines for spring stock from cold storage, and summer stock that is hot-lifted
- microsite planting
- Provincial Seedling Stock Type Selection and Ordering Guidelines MOF, 1998

7. Technology

It is recommended that all recipients and FFT contacts use a consistent program wide seedling tracking system to ensure the efficient tracking and handling of seedlings (i.e. NSA, Plantwizard or similar).