

SPU # 23

Interior spruce / Sitka spruce - Submaritime, Nass-Skeena transition

CONSERVATION -- GENECOLOGY -- SEEDLING USE

Annual planting (million): **0.7**

Program category: **Genecology**

Filename: 23 SxSs SM/Ns all Sept 2017

GENETIC CONSERVATION STATUS

Conservation statistics

Seed planning unit (SPU) area	993,526	ha
Area protected within SPU	70,622	ha
Percentage of SPU area protected	7%	
Estimated genetic reserves with >5000 mature trees based on botanical sample data	>6	
Confirmed genetic reserves with >5000 mature trees based on forest inventory data	28	

Conservation status

Current in-situ protection status: **Very well protected ***
 Probability of maintaining > 3 protected areas with adequate population size given natural disturbance regimes: **Very high**

* In-situ protection in Nass Skeena area less certain; considered adequate

For further information visit <http://www.genetics.forestry.ubc.ca/cfgc/>

GENECOLOGY

Issues:

Introgression of Sitka spruce and white spruce through the Nass and Skeena valleys has resulted in a zone of sitka by white hybrids. Geographic patterns of hybridization, and seed transfer are not well understood in the Nass/Skeena area. Seed transfer guidelines are under refinement.

Provenance testing:

First tests of local seed sources established in 1988. Progeny tests of white spruce are established in the Bulkley zone to the east, and tests of Sitka spruce are established in the Maritime zone to the west.

Field trials to better understand geographic patterns of hybridization were planted in 2000.

Nursery and genomic studies of the patterns of hybridization have been completed for the Nass / Skeena transition zone area.

Little hybridization is evident south of the Nass/Skeena areas.

Projects:

Maintain existing tests.

Seed production:

Orchard 131 (Ministry of Forests and Range - Cobble Hill) was retired in 2002. Large amounts of seed are in storage from this orchard.

Uncertainties concerning geographic patterns of hybridization emphasize the desirability of local seed use.

Seed production areas (SPAs) within the Nass/Skeena zones of hybridization are recommended. Selections from existing tests could be used to improve SPAs.

SEEDLING USE AND SEED IN STORAGE

5-year average seedling requests to SPAR (2013 - 2017)

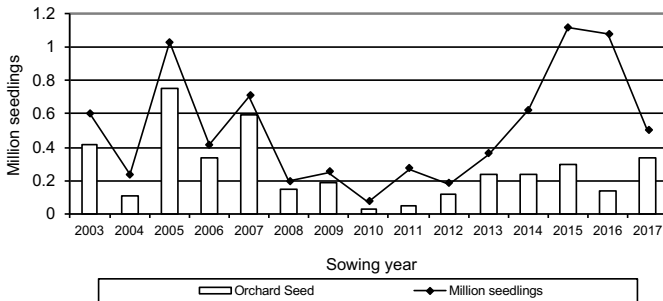
0.7 million

Estimated years of class-A seed in storage

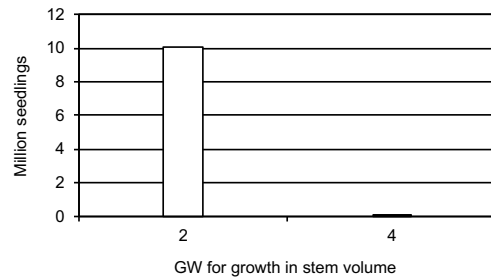
13.7 years

Class A seed from retired MoF Cobble Hill orchard

Seedling Use Trend - 2003 to 2017
SPU 23 SxSs SM/NST all



Seed in Storage by GW class



Notes:

- Seedling use data include 1/2 of adjacent overlap zones, where applicable
- Sowing year: Aug 1 to July 31 (i.e. 2017 sowing year starts Aug 1, 2017)

Notes:

- "Reserve" and "Available" seed in the Seed Planning and Registry System (SPAR) are included.
- Class A = seed orchard; Class B+ = superior provenance; Class B = wild stand seed.
- Genetic Wroth (GW) for growth means the projected additional wood volume available at rotation compared to using Class B seed.

The above forecasts are based on orchard status, seed inventories and seed use as of June, the year of publication, and are subject to change. Refer to the seed Planning and Registry System (SPAR) or contact the orchard manager for current seed inventories. Contact the Forest Improvement and Research Mgt. Branch, Ministry of Forests, Lands, Natural Resource Operations and Rural Development, to confirm data if used for silviculture or timber-supply planning.