

SPU # 50	Western Larch Nelson 1200 - 1800m																				
Breeding and orchard production																					
Program category: first-generation																		Seedling need (million): 0.5			
filename: 50 Lw NE high July 12, 2015																					
STRATEGY	Parent tree selection in wild stands; open-pollinated progeny tests. Selection of best parents for seed orchards. Open-pollinated seed production in orchards. Focus on volume while maintaining wood relative density (RD).																				
TRAITS	Primary: Stem volume						Secondary: Wood density														
TESTING AND PRODUCTION	Production Year (July 1 to June 30) -- (Cone harvest year shown)																				
	'15	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	
Parents in progeny test:																					
Open pollin.	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	
Polycross																					
Clonal																					
F1 (144 Full-sib families)																					
F2																					
F3																					
Production forecast (million plantables)																					
Orchards (#, owner)																					
353 Vernon private	0.9	1.3	1.7	2.0	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
<p>Note: The current Parent Tree area-of-use is 1400-1800m, however, there is an expectation that the lower elevation band will be reduced to 1200m as seed comes available from this orchard. Therefore, a 1200 to 1800m band is used for orchard planning.</p>																					
Vegetative prod.:																					
Phase 1																					
Phase 2																					
Estimated gain in primary trait																					
Orchards (#, owner)																					
353 Vernon private	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	
Vegetative prod.:																					
Phase 1																					
Phase 2																					
Total Production	0.9	1.3	1.7	2.0	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Total gain	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%
Estimated orchard gain and production SPU 50 Lw NE 1200 -1800m																					
 Actual production Actual wtd. GW Forecast seedling prod. Est. seedling need Forecast GW (primary trait)																					
<p>Seed production estimates are subject to change. When using this information for silviculture planning or timber supply analysis, contact the Tree Improvement Branch of the Ministry of Forests Lands and Natural Resource Operations to confirm data. See SeedMap on www.for.gov.bc.ca/hti/seedmap for current inventory by Seed Planning Unit</p>																					

Western Larch Nelson 1200 - 1800m Conservation -- Seed Orchards -- Seedling Use

SPU #50

GENETIC CONSERVATION STATUS

Conservation statistics

Seed planning unit (SPU) area	1,361,077	ha
Area protected within SPU	125,532	ha
Percentage of SPU area protected	9%	
Estimated genetic reserves with >5000 mature trees based on botanical sample data	0	
Confirmed genetic reserves with >5000 mature trees based on forest inventory data	5	

Conservation status

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

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

ORCHARD STATUS

Orchard location	Orchard number	Number of parents	Mean BV	# of ramets currently established	# of ramets planned for final orchard size	Target Seed production kg/y at maturity	Total Seedling Prod. million seedlings
353 Vernon private		39	13%	390	400	25.1	2.2
Total ramets				390	400	Total production	2.16

Vegetative propagation	Stecklings/Emblings	0.0
	Total production	2.2

Seed and Nursery Factors

Expected annual average seedling production per ramet = 5,400
Seed weight (seeds/gram) = 189
Seedling recovery factor (seedlings/seed) = 0.45
Seedling recovery factor (seeds/seedling) = 2.20

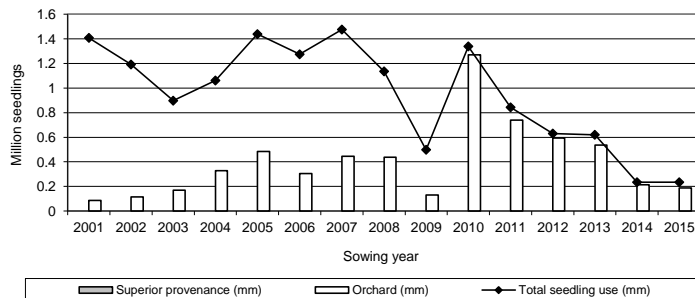
Estimate of Required Orchard Capacity

Annual planting (million seedlings)	0.5
Planned over-production factor	1.3
Ramets required	95
Ramets required with over-capacity	119
Projected necessary expansion	0

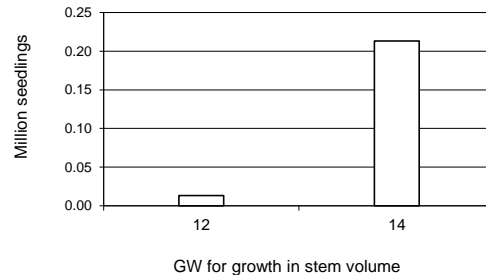
SEEDLING USE AND SEED IN STORAGE

Average 5-year seedling use from SPAR (2011 - 2015) **0.5 million**
Estimated years of class-A seed in storage **0.4 years**

Seedling Use Trend - 2001 to 2015



Seed in Storage by GW class



Notes:

- Seed held in both "reserve" and "available" status in the Seed Planning and Registration (SPAR) system is included
- Seed inventories change with new orders. Data presented here are based on a June sample.
- For up-to-date information use SPAR, or contact the Tree Improvement Branch of the Ministry of Forests and Range

- Seedling use data include 1/2 of adjacent overlap zones, where applicable
- Sowing year: Aug 1 to July 31 (i.e. 2015 sowing year starts Aug 1, 2014)

Seed production estimates are subject to change. When using this information for silviculture planning or timber supply analysis, contact the Tree Improvement Branch of the Ministry of Forests Lands and Natural Resource Operations to confirm data.
 See SeedMap on www.for.gov.bc.ca/htl/seedmap for current inventory by Seed Planning Unit