



Cone and Seed Improvement Program BCMoF Tree Seed Centre



Information forwarded to BC nurseries
prior to 2004 sowing season

5-Year Average SRQ Germination Falldowns (1999-2003)

Species	LAB		SRQ			Nursery		
	n	GC%	n	GC%	Falldown	n	GC%	Falldown
Ba	53	72	52	75	+ 3 %	27	71	-1 %
Bg	30	74	30	77	+3 %	22	69	-5 %
Bl	67	74	66	65	-9 %	41	65	-9 %
Cw ¹	210	81	211	75	-6 %	98	78	-3 %
Dr	16	72	16	69	-3 %	14	64	-8 %
Fdc	60	93	66	93	±0 %	34	88	-5 %
Fdi	78	88	78	89	+1 %	45	88	±0 %
Hm	18	83	18	89	+6 %	11	80	-3 %
Hw	57	89	57	87	-2 %	33	85	-4 %
Lw	103	83	103	75	-8 %	45	85	+2 %
Pli	155	92	155	91	-1 %	74	91	-1 %
Pw ²	132	90	124	66	-24 %	84	74	-16 %
Py	57	90	56	88	-2 %	21	86	-4 %
SS	31	93	31	91	-2 %	14	90	-3 %
Sx	168	89	167	91	+2 %	92	89	±0 %
SxS	10	85	10	86	+1 %	3	78	-7 %
Total	1240		1245			658		

¹ LAB germination for Cw is based in naked seeds, but SRQ and Nursery germination is based on pelleted Cw seed.

² The 2003 SRQ falldown for Pw was estimated at -10.1% and the nursery falldown estimated at -8.0%. There have been steady improvements in the GC of Pw sowing requests over the past three years.

- Our TSC Quality Assurance (QA) program includes testing a sample of sowing requests for germination prior to shipping
- This allows for a comparison between **LAB** germination, germination of sowing requests at shipping (**SRQ**), and actual germination at the **Nursery** for SRQ's in which the data has been supplied
- **LAB** germination is used in BCMOF sowing guidelines and is the main variable used for planning purposes.
- Falldowns are presented as the difference between **LAB** germination and actual germination of sowing requests (**SRQ**) or at the Nursery (**Nursery**). A negative falldown indicates value at shipping or at the nursery is less than **LAB** germination. Only species with ≥ 10 SRQ's are included.
- The falldown estimates are important in prioritizing species for pretreatment improvements.
- Some possible reasons for the falldowns are proposed below:

SRQ Falldown

- More intensive sampling used for **LAB** testing compared to **SRQ** withdrawal
- Larger volume of seed can be problematic for optimal pretreatment (i.e. Pw)

Nursery Falldown

- More intensive sampling used for **LAB** testing compared to **SRQ** withdrawal
- No consistent method of determining germination in the **Nursery** (i.e. sample size; some nurseries do not do germination counts or only monitor filled cavities)
 - Germination criteria quite different between **LAB** tests and the **Nursery**
 - Germination results from the **LAB** are generally over a shorter time compared to the **Nursery**
 - Germination conditions can be quite different between **LAB** and **Nursery**
 - Germination conditions more uniform in **LAB** compared to **Nursery**
 - Seed pretreatment may be different or additional treatments may take place at **Nursery** (i.e. seed upgrading, sanitation, different stratification methods)

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