ITAC Meeting
Vernon BC
Nursery Perspective
Options for Consideration

February 6, 2019

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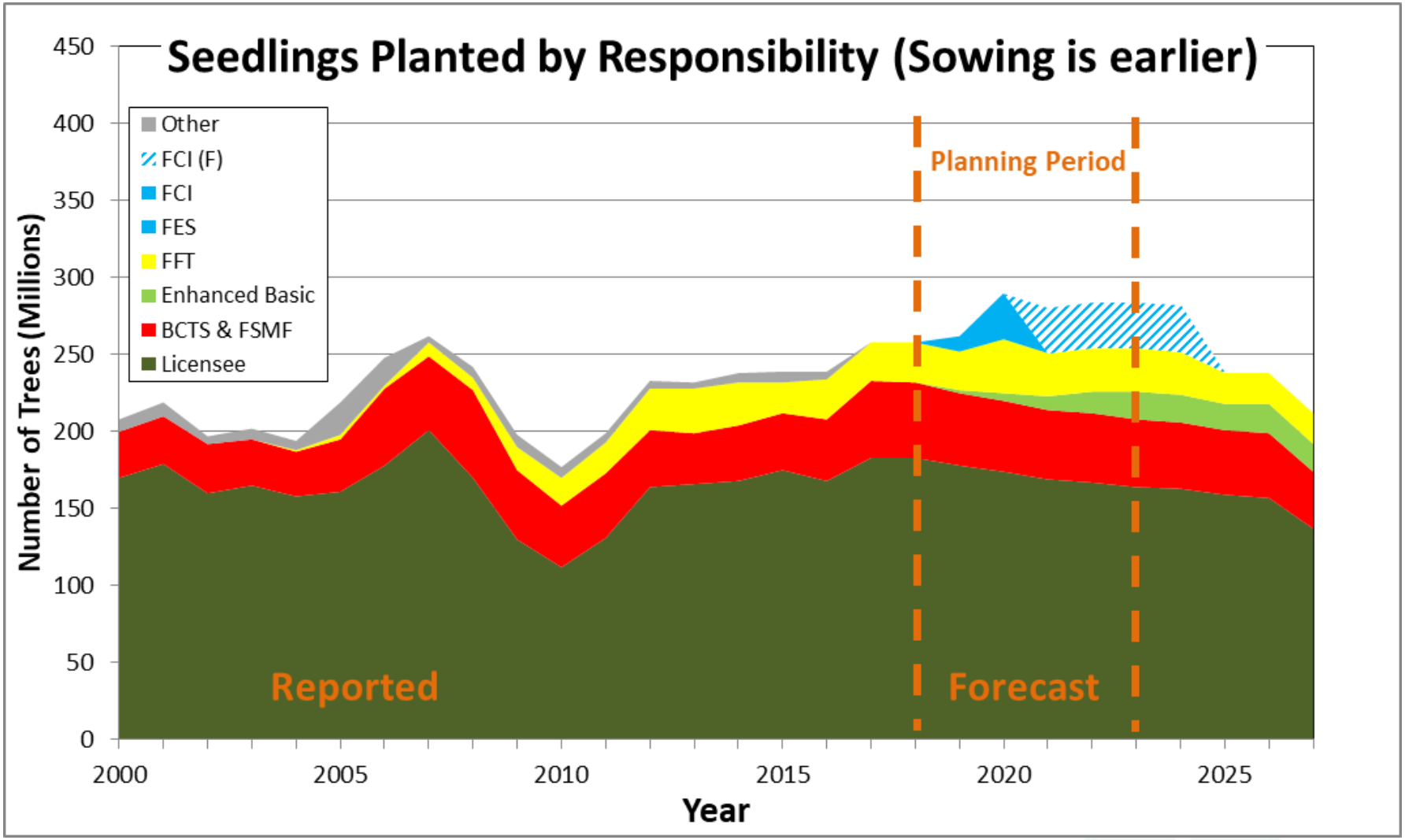
Provincial Sowing Requests on the Rise



Provincial Sowing Requests on the Rise

Key Drivers:

- Government programs – FFT, Forest Carbon…
- Enhanced basic silviculture
- Wildfires (section 108)
- Drought kill
- High lumber and log prices = Higher harvesting levels

Provincial Sowing Requests on the Rise

Overall Silviculture Sector Impacts:

- **Nursery space shortage**
- **Labour Shortages – Both in Planting / Nursery Sectors.**
- **Potential seed scarcity (for some species and / or areas).**

Provincial Sowing Requests on the Rise

Nursery Impacts - 2018:

- **Provincial nursery capacity was close to full pool in 2018.**
- **Expansion occurred during 2018 adding approximately 250,000 blocks of space (25 MM trees).**
- **Most expansion was for open compound but some green house expansion did occur – Ratio – 75 / 25**

Provincial Sowing Requests on the Rise

Nursery Impacts - 2019:

- **2019 sowing request demand far exceeds nursery capacity, (even with the 250K block 2018 expansion).**
- **10’s of millions of trees turned away from both industry and government.**
- **These orphan trees will need to find nursery space in future sowing seasons.**
- **Seedling demand expected to remain at current high for the next 3 to 5 years.**

Provincial Sowing Requests on the Rise

Nursery Impacts – 2019+:

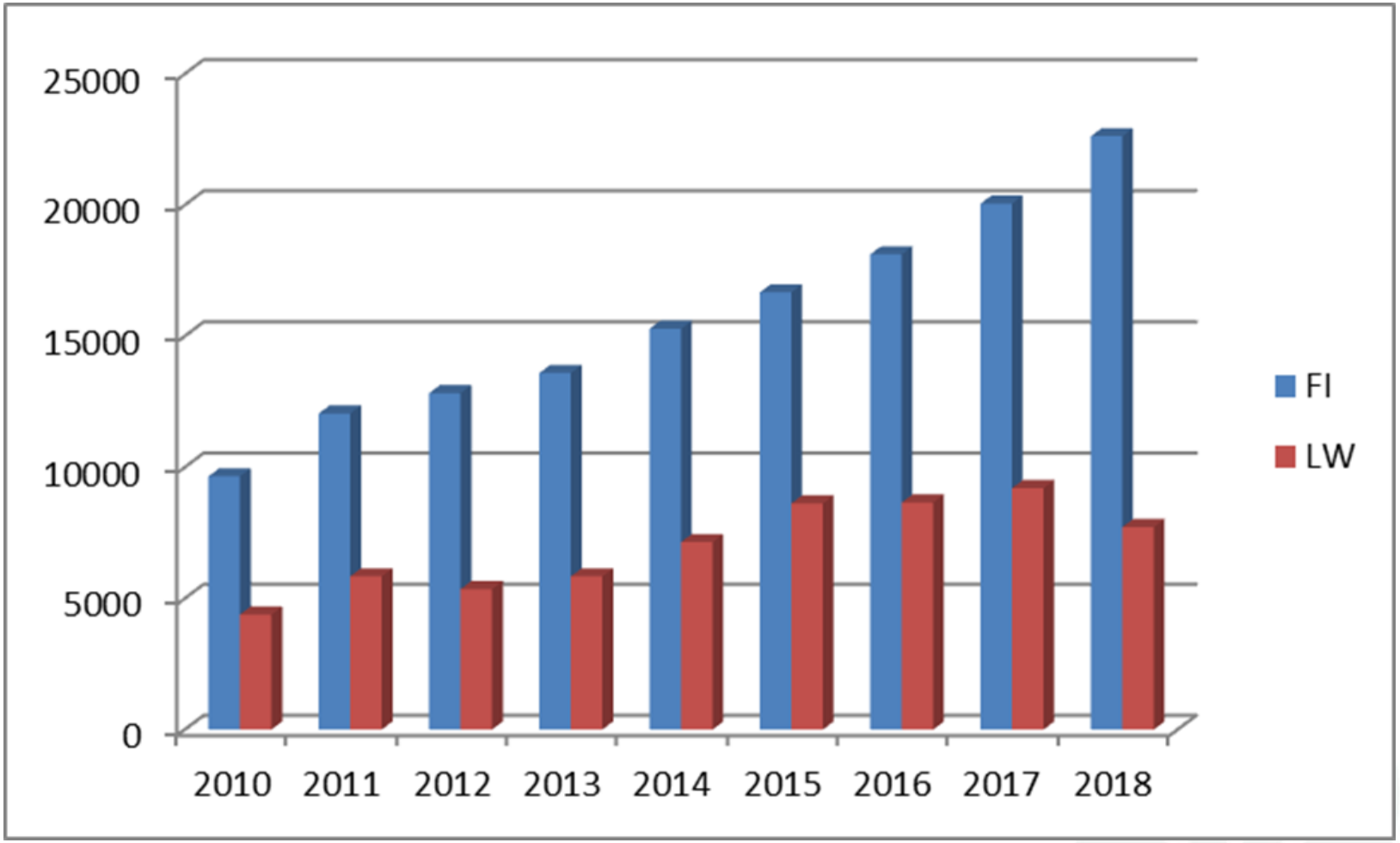
- **Future nursery expansion will likely be limited even with projected continued large seedling volumes over the next 3 to 5 years.**
- **Nursery industry does not want to over-build only to have significant over capacity when current seedling bubble passes.**
    - **Over-build would have the potential to destabilize the nursery industry (pricing – race to the bottom).**

Important Trends

Greenhouse Pressures:

- **Fdi orders are increasing each year adding more pressure to green house grown crops.**

BC Increasing demand for FI - 2019 FI = 38.8 MM

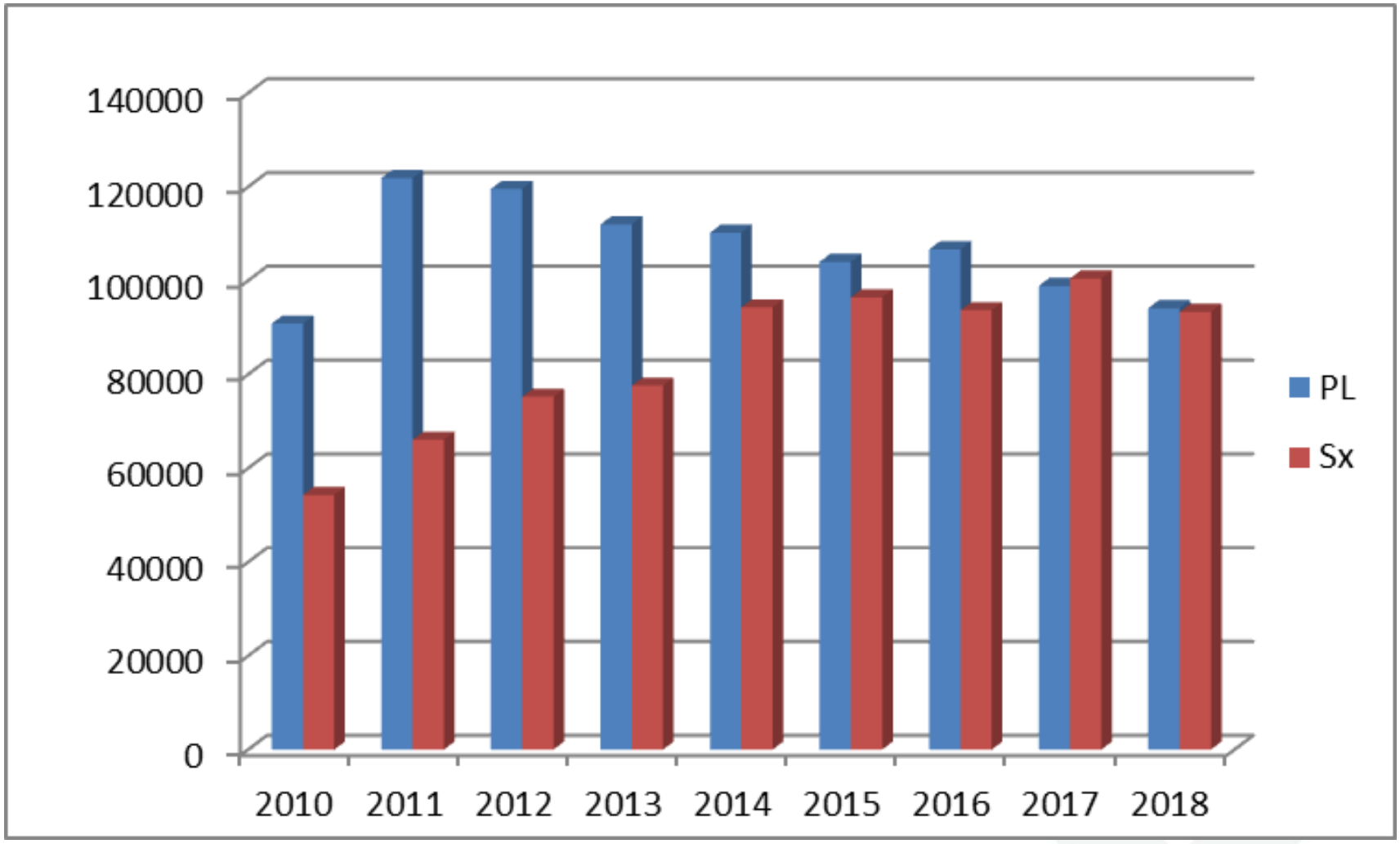


Important Trends

Greenhouse Pressures:

- **Sx orders have seen significant increases over the last several years.**
- **Most nurseries grow Sx as a green house crop.**

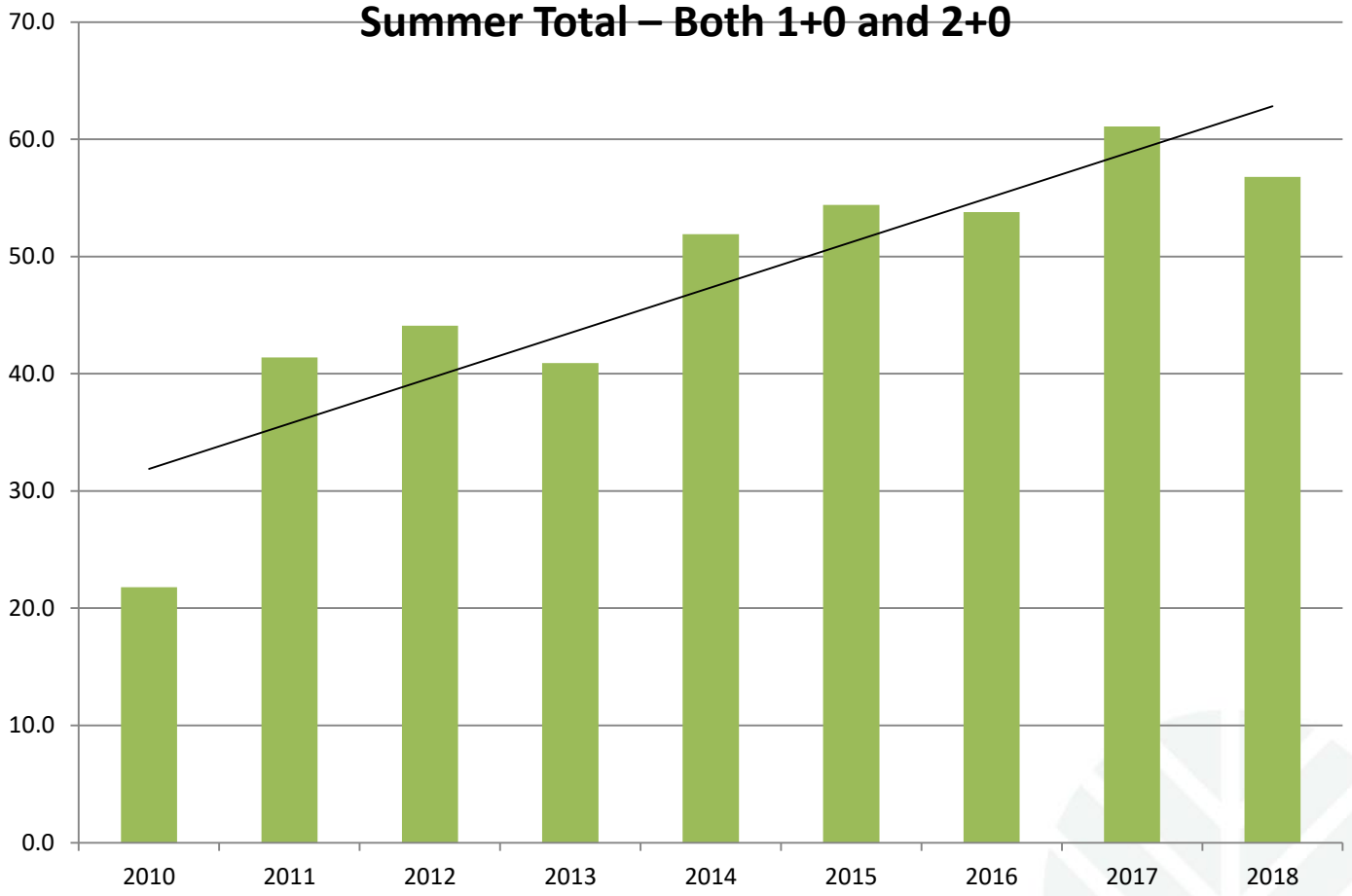
Overall BC SX And PL



Important Trends

Greenhouse Pressures:

- **Summer 1+0 orders are also increasing**


Summer Total – Both 1+0 and 2+0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
2010
2011
2012
2013
2014
2015
2016
2017
2018

Potential Opportunities to Help Mitigate Supply and Demand Pressures On

- Nursery space
- Labour shortage
- Seed supply

- 5 Opportunities

Short Term Solutions to Help Alleviate Nursery Capacity Pressures During the Seedling Bubble

1. **Consideration to bench run seedling growing specifications.**
    - **All trees lifted and packaged as long as they meet min criteria and have good morphology and rooting structure.**
        - **More seedlings produced per square foot.**
        - **Better seed use.**
2. **Use smaller stock sizes = Taking on more risk.**
    - **Significant gain in nursery space utilization.**
    - **Relatively small difference in performance between alternative stock sizes.**

Short Term Solutions to Help Alleviate Nursery Capacity Pressures During the Seedling Bubble

Small Stock Size

- 310B to 309
  - 160 vs 180 cavities per block - 12.5% savings
  - Growing specifications almost identical.

Medium Stock Sizes

  - 410 to 411B or 310B
  - 410 – 411B – 112 vs 144 cavities = 28.5% savings
    - Growing specification almost identical.
  - 410 to 310B – 112 vs 160 cavities = 42.8% savings
    - Option for Pli

Short Term Solutions to Help Alleviate Nursery Capacity Pressures During the Seedling Bubble

Large Stock Size converted to Smaller Stock Size

- 412A to 412B
  - 77 vs 112 cavities per block – 45.5% savings
  - Suitable for many greenhouse species – Fdi, Cw, Sx
- 512A to 412A
  - 60 vs 77 cavities per block – 28.3% savings
  - Suitable for many greenhouse species – Fdi, Cw, Sx

Short Term Solutions to Help Alleviate Nursery Capacity Pressures During the Seedling Bubble

3. Help your nursery to keep it simple.

- **The following practices will help nurseries cope with worker labour shortage issues and crop quality / reliability:**
  - **Keep request key size as large as possible. Difficult to manage small orders.**
  - **Keep I-wrap to a minimum – Takes 2 to 3 times longer to lift a I-wrap tree vs a conventional tree. Longer lift times impact on labour shortage problems (i.e. Lifting into January).**

Short Term Solutions to Help Alleviate Nursery Capacity Pressures During the Seedling Bubble

4. Seedlot Germination Percent.

- Where possible, use high germination seedlots and avoid low germination ones.
- Low seedlot germination nursery impacts include;
  - Increased seed use (seed used per cavity).
  - Increased nursery space use (increased oversows).
  - Impacts on stock quality and reliability
  - Low germ lots take much more nursery resources (people and capital) to produce crops.

Low Germination Seedlot

- **Result = Empties and Transplants**

Short Term Solutions to Help Alleviate Nursery Capacity Pressures During the Seedling Bubble

5. Consider Fall Planting as an Option

- Not commonly used in the BC interior. Less than 1 million trees FA planted annually.
- Used more commonly on the Coast and US PNW.
- For Interior BC, most suitable for wet belt zones.
- Planting window – Sept 7 to Oct 1.
- Want some root egress prior to dormancy.
- Need adequate soil moisture before planting.
- Seedlings can be held-over to the spring if not fall planted.

Short Term Solutions to Help Alleviate Nursery Capacity Pressures During the Seedling Bubble

Some Advantages of Fall Planting;

- Helps with labour shortage issues at the nursery and with the planting contractor.
- Potentially better survival on dry or multiple planted sites.
  - Fall root egress helps stabilize tree for the spring.
  - Tend to get better planters for fall planting.
- Easier access for planting in some cases.
- Fewer stock handling concerns.
- Reduces costs – no cold storage.

Short Term Solutions to Help Alleviate Nursery Capacity Pressures During the Seedling Bubble

Some Drawbacks to Fall Planting;

- Another program to administer during an already busy schedule.
- Potential for frost damage.
  - More so for A class stock than B class. A class is harder to shut down.
  - Lw and Cw more susceptible to cold damage.
- Program success is weather dependent.
- Foresters do not have a lot of experience with this season of plant and are skeptical.