

Wildstand Cone Collection Workshops - June 2018

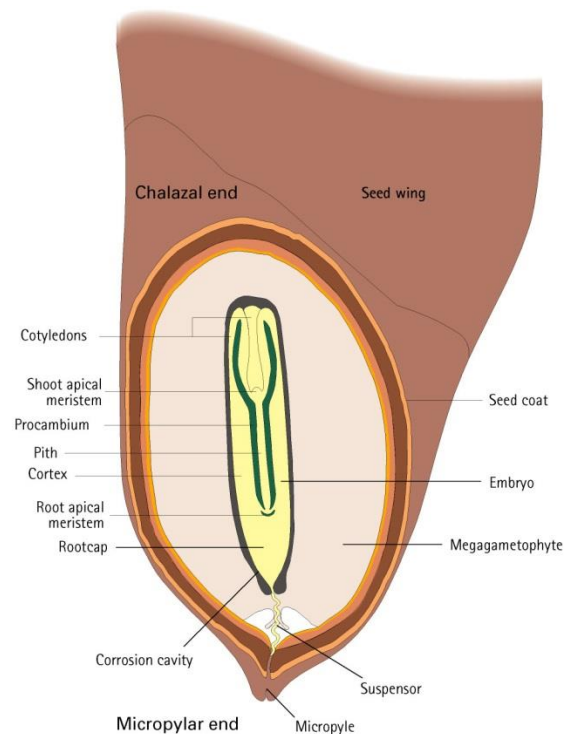
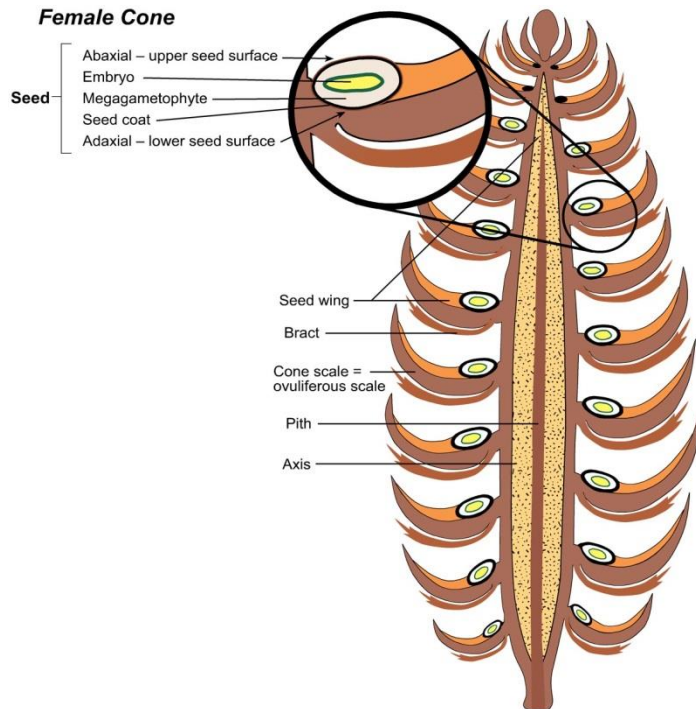
Cone and Seed Biology

- ★ Seed is a living biological end-product of genetic and environmental interaction and it's behaviour cannot be predicted with certainty
- ★ Genetic diversity is very high in conifers = long-lived organisms
- ★ Resin vesicles are found in all species of *Abies*, *Thuja*, *Tsuga* and *Juniperus*
- ★ Damage to resin vesicles will reduce potential germination
- ★ The higher the moisture content of cones and seeds the greater the risk of damage
- ★ Conifer tree seeds are generally high in fats making it an energy-rich food source

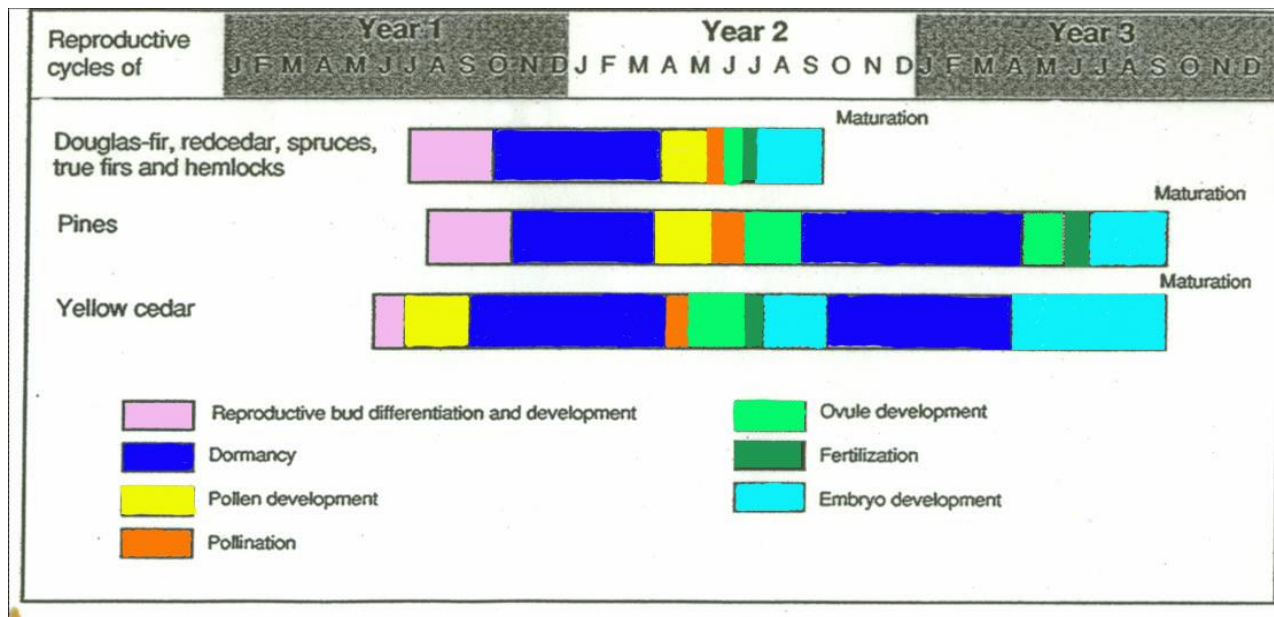
Any Evaluation or test is only as good as the sample taken

- ★ Randomly selected and representative of final products are the keys to sampling

Female Cone



BC Conifer Reproductive Cycles

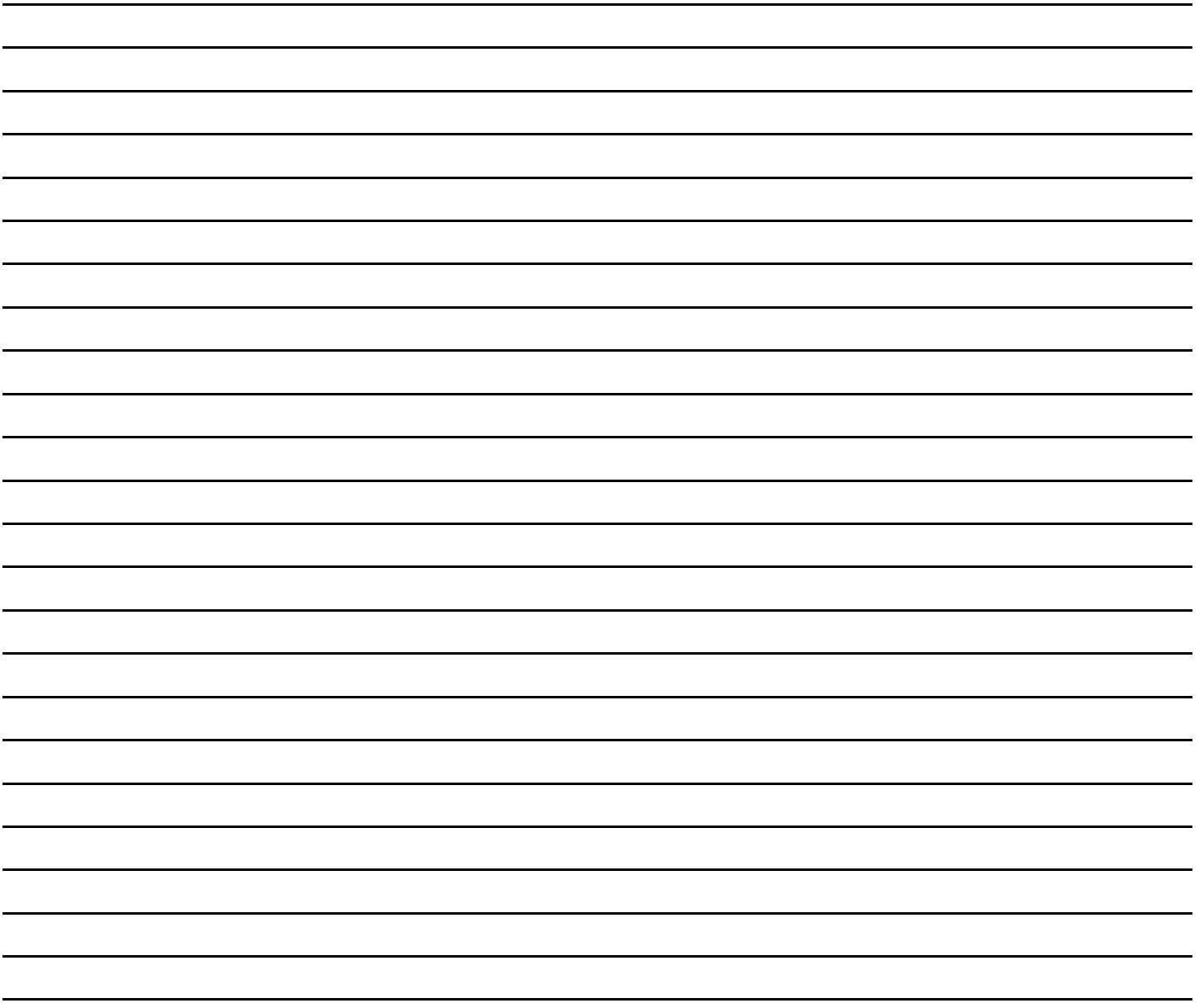


Cone Collection Due Diligence

- Use new sacks or properly sterilized sacks (steam/hot water)
- Fill sacks ½ to ⅓ full to minimize heat build-up
- Keep sacks off ground / on sides to reduce weight
- Place sacks in shady environment with good air circulation
- Turn sacks to maintain uniform aeration
 - Frequency depends on moisture content
- Move sacks daily from collection site to interim storage
- Limit amount of debris (moisture / fungi / abrasive)
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Squirrel caches

- Can produce good quality collections – cheaply
- RISK – especially in wet, cool weather
- Handle with extra care (maturity, heat build-up??)



Tree Seed Centre Contact list

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Tree Seed Centre program, staffing and activities.

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Invoicing, pricing and revenue management program.

Dave Kolotelo

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Seed science and technology, research, extension and seed testing & quality assurance program.

Laura Klade

Testing Supervisor

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Seed testing methodology, status and results for new, returned, stored and quality assured seedlots.

Marilyn Cherry

Cone & Seed Operations Officer

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Cone & Seed Processing and Inventory Management services and activities.

Spencer Reitenbach

Inventory Management Supervisor

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Inventory management activities, status and results to include receipt of seed, seedlot registration, information about stored seedlots, seed sales, seed withdrawals for sowing & other purposes, stratification/pelleting and returned seed program.

Debbie Picard

Cone & Seed Processing Supervisor

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Cone and seed evaluations and shipments, status and results of cone and seed processing activities from receipt through to final cleaning and separation.

For general enquiries, call or email the Tree Seed Centre.

Hours of Operation: 8:00 a.m. to 4:00 p.m., Monday through Friday

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REFERENCES

Cone and Seed Biology

Seed Handling Guidebook

https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-seed/tree-seed-publications/seed_handling_guidebook_hi.pdf

Anatomy & Morphology of Conifer Tree Seed

<https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/tree-seed/tree-seed-publications/anatomymorphology.pdf>

A Guide to Collecting Cones of BC Conifers

<https://www.for.gov.bc.ca/hfd/pubs/Docs/Frr/Frr055.htm>

Afield Guide to Collecting Cones of BC Conifers

<https://www.for.gov.bc.ca/hfd/pubs/Docs/Frh/cones.pdf>

Cone and Seed Pests

FGC Pest Management Leaflets – 14 ‘common ‘ cone and seed pests.

<http://www.fgcouncil.bc.ca/doc-09-pestmaninfo.html>

Cone and Seed Insects of BC

<http://cfs.nrcan.gc.ca/pubwarehouse/pdfs/3955.pdf>

Cone and Seed Insects of North American Conifers

<http://cfs.nrcan.gc.ca/pubwarehouse/pdfs/2026.pdf>

USDA Northern Region Cone and Seed Insect Handbook

<http://fsweb.r6.fs.fed.us/natural-resources/seed-genetics>

Insects of Seed Cones in Eastern Canada – Field Guide

<https://cfs.nrcan.gc.ca/publications?id=33708> can download pdf or order hardcopy