Petawawa Research Forest
Celebrating 100 Years of Research

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PRF Overview

- 10,000ha
- Great Lakes – St. Lawrence Region
- Presence of Boreal species
A Journey Through Time

- 1900's: Forests unsustainably managed
- 1900's: Permanent Sample Plots
- 1918: PRF established, installation of PSP1 and PSP2
- 1950's: PRF flown for multi-spectral LiDAR and contributes to species prediction efforts
- 1960's: PRF flown for LiDAR to contribute to Enhanced Forest Inventory
- 1980's: Developing CFFDRS - a system to rate the risk of forest fires
- 1990's: MRSA study shows the effects of crown spacing and site preparation on regeneration

Canadian Wood Fibre Centre
Working together to optimize wood fibre value – creating forest sector solutions with FPinnovations
The Beginning 1918

- Forestry Canada asked to manage forest for Petawawa Military Reserve
- Petawawa Forest Experiment Station (PFES)
- Primary focus: Fire suppression and forest management
- Establishment of PSP 1
- One of the first looks at sustainable management
Early Research: Silviculture

- Will Stiell (applied Silviculture research officer)
- “High yield” Silviculture
- Thinning, pruning, spacing trials
- White Pine weevil control
Early Research: Fire

- Effects of fire on trees
- Fire ecology and prescribed burns
- Development of early version of Canadian Forest Fire Danger Rating System (CFFDRS)
Early Research: Genetics

- Kris Morgenstern (genetics researcher)
- Tree breeding success
- Increased performance and adaptation
- Ben Wang (tree seed researcher)
- Established international protocols for seed storage, treatment and germination
The Station becomes an Institute

- April 1, 1979
- Petawawa National Forestry Institute (PNFI)
- Started with 2 major programs
- Grew in size and complexity with multiple areas of study
- Hub of activity with staff, visiting scientists, postdoctoral fellows
Some research impacts

- Red Pine Spacing Trial
  - Red pine management handbook
- Pine Shelterwood study
  - Silvicultural guidelines
- CFFDRS continues as robust model for fire hazard rating
- Tree Breeding Program
  - Pest & drought resistance
Dissemination of knowledge

Third most cited paper in the history of the Canadian Journal of Forest Research:
*Conditions for the start and spread of crown fire*
Cited by 942

Seventh most cited paper in the *Forestry Chronicle*:
*Forest inventory in Canada with emphasis on map production*
DG Leckie, MD Gillis - The Forestry Chronicle, 1995 - pubs.cif-ifc.org
Cited by 105

Petawawa's most cited article:
*Development and Structure of the Canadian Forest Fire Weather Index System*
Cited by 1109
The Institute is back to a Research Forest

- PNFI officially closed in summer 1996
- Re-opened as the Petawawa Research Forest (PRF)
- “Future work will have to be creative, cooperative, and consultative”
- Active in research, operations, and engagement
The current studies are building on PRF’s heritage
Future perspectives

- 100 years old - can’t buy time!
- Robust baseline data legacy
- New studies every year with varied focuses
- Knowledge exchange with schools, public, and private stakeholders
- Strong partnerships at the academic, provincial, and federal levels
- Learning from the past to inform our future
Thank you!

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