

Quesnel Innovative Harvesting Training 2024

BACKGROUND

Quesnel is in the heart of a pivotal transition occurring in BC's interior forest ecosystems. Changes in training and workforce development will be necessary to navigate this transition. A major challenge the sector is facing in the coming years is a lack of trained operators to carry out complex forest operations. Innovative harvesting equipment, commonly used in Europe, allows for "lighter touch", "zero-waste", and other more diverse silvicultural treatments more effectively than traditional harvesting methods.

Single-grip harvesters and forwarders are high-tech pieces of equipment that incorporate advanced technologies and software applications. In Finland and Sweden, where the majority of these machines are employed, education programs have developed over several decades and train operators not only to be good machine operators but also to have a basic understanding of forest practices to ensure sound decision-making.

Simulators are a key piece of the training equation that enable students to gather experience in a non-threatening environment with immediate real-time feedback from the technology. Simulators also allow trainers and other classmates the opportunity to watch the student operating the simulator, an effective peer-to-peer learning technique. Furthermore, simulators reduce costs, as training takes place in a classroom rather than on actual equipment, reducing fuel, maintenance, and carbon footprint.



Ponsse Simulator



Ponsse SimTrainer

OUTCOMES

The intended outcomes of this project are to:

1. Teach machine operation to students
2. "Train the trainers" who will transfer the knowledge
3. Develop BC-specific curriculum using best practices and learnings from other places to help identify and mitigate barriers to success
4. Build capacity within BC training institutions
5. Support existing forest contractors and encourage new ones
6. Develop strategies to maintain long-term employment
7. Track the associated changes needed for forest managers through the transition
8. Inform the larger Provincial policy and legislation changes that are currently underway and that this project is embedded within

PROJECT PARTNERS

- Nazko First Nation
- The City of Quesnel
- University of British Columbia
- Riveria Training School, Finland
- College of New Caledonia
- West Fraser Mills
- Natural Resources Finland Luke and Metsäkeskus
- FP Innovations

The PROPOSED PILOT PROJECT

The proposed project will include: machine operator curriculum using the best knowledge to date and lessons learned from Riveria Training School in Finland including best practices, working instructions and lessons learned. The project will also include guidance from industry partners (West Fraser), academic (UBC) and training (CNC) institutions, as well as guidance from Natural Resources Finland on research methods that have been developed in Finland to determine the well-being of Finnish machine operators in order to monitor and support operators as they progress through the learning milestones.

The knowledge acquired during this process will be essential to inform future curriculum development and will also support the creation of long-term strategies and benchmarking tools that will allow us to determine key attributes that identify above-average operators (e.g. cognitive ability, motor-sensory skills, energy level, resiliency mind-set etc.).

RESEARCH QUESTIONS

- What is the most effective way to develop and tailor a comprehensive and effective curriculum for innovative machine harvesting in the BC context?
- How can BC adopt state-of-the art forest management planning tools into harvest planning and curriculum?
- What is the best approach for effective knowledge transfer for a high-tech skill acquisition in a relatively short period of time (15-week course)?
- What support measures need to be in place for machine operators after they graduate to further their success (measured in employment)?
- What are key factors affecting operator job satisfaction in order to maintain the trained individuals in the forest sector?
- What barriers do students and trainers face in a 15-week training course, and how can these be mitigated strategically?

FIND OUT MORE

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