



**In our news today:**

- **Getting to the Seed of the Matter**  
*"From a small seed a mighty trunk may grow."  
Aeschylus, Greek Playwright (524 BC – c. 456 BC)*

PRT has built its reputation on the provision of high-quality seedlings – up to 225 million per year! But did you know that PRT also has a seed orchard operation which produced seed for roughly 11 million seedlings in 2009? PRT Armstrong in Armstrong, BC is owned and operated by PRT. Aside from being PRT's largest seedling nursery, the Armstrong site is also home to 6 seed orchards – 5 for Lodgepole Pine one for Interior Douglas-fir.

- **PRT Harrop – A Pioneering Nursery with Leading Edge Results**  
*This is the first in a series of articles highlighting PRT nurseries across North America.*

PRT Harrop, located in the southeastern corner of British Columbia, was one of the original six nurseries acquired by PRT in 1988. PRT Harrop is in climate zone 5/6 and has an annual production of 14 million container seedlings.

- **Going Green Makes Dollars and Sense**  
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In recent years, these efforts have taken on a new twist as some of our customers have chosen to be certified by the Forest Stewardship Council (FSC).  
Since 2004, PRT has been working together with FSC-certified customers to reduce the use of chemicals and find environmentally-friendly alternatives for pest management.

**GETTING TO THE SEED OF THE MATTER**

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The Douglas-fir seed orchard is producing seed with a genetic worth of 27 for lower elevations of the Nelson (NE) seed zone (400 to 1,200 m or 1,300 to 3,900 ft). Three of the Lodgepole Pine seed orchards are TO (Thompson Okanagan) orchards producing seed with a genetic worth of 7-17 and suitable for elevations between 700 and 1,600 m (2,300 and 5,300 ft). The remaining two Lodgepole Pine orchards are producing seed for the NE zone with a genetic worth of 16 within the same elevation ranges.

The PRT Armstrong seed orchard uses the latest technology to increase



the quality and quantity of seed produced. Starting with grafts that have been specifically selected for their genetic qualities, PRT Armstrong produces cones using a variety of orchard management techniques including the induction of cone production in firs through the injection of hormones.



"We take advantage of the climate to help us produce more cones, too," says Hilary Graham, PRT Armstrong's seed orchard superintendent. "Because the weather is so hot and dry here, we are able to stimulate cone production in pines through drought stressing."

Once the cones are harvested, they are sent to PRT's specialized cone processing facility in Prince Albert, Saskatchewan or the BC government tree seed facility in Surrey where the seeds are extracted and processed under strict provincially-legislated guidelines. The extracted seed is tested for germination capacity, purity and to ensure that it is disease-free. The seed is also carefully labeled and tracked so that customers know where the seed came from.

"Seed from seed orchards grows faster, has better genetic traits and is more reliable," says Dan Livingston, Customer Service Representative for PRT. Much of our seed is sold through the SPAR database, but if customers are interested, they can contact us in advance and purchase in bulk. This can avoid disappointment if the seed they want is not available."

For more information about PRT Armstrong, visit [www.prt.com/page189.htm](http://www.prt.com/page189.htm).

## **PRT HARROP – A PIONEERING NURSERY WITH LEADING EDGE RESULTS**

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A wide variety of seedling species has been successfully grown at PRT Harrop with a particular focus on difficult crops such as Western Red Cedar and Western White Pine 1+0, as well as Balsam 2+0.

The 18 ha (45 acre) operation located near Nelson, BC, on the western arm of Kootenay Lake, has more than tripled in size since its acquisition. Currently, PRT Harrop has 55% of its space in outdoor compounds and 45% in greenhouses.

"We have two types of greenhouses," says Ray Bagnell, PRT Harrop Nursery Manager, "ground to ground and one large nine bay range. All of the greenhouses are equipped to handle rolling forestry pallets, so we can double crop. We move "early greenhouse" crops outside in May and sow "late greenhouse" crops in the vacated space."

Harrop was also the first PRT site to utilize "mini-plug" technology. This technology allows for seedlings to be started in high-density blocks and then mechanically transplants them into conventional blocks. This gives the nursery more capacity because the "mini plug" blocks start out in a greenhouse, then the transplanted crops are finished in an outdoor compound. Based on Harrop's success PRT now has four sites capable of utilizing mini-plug production.

In addition, the Harrop nursery has a one million gallon reservoir feeding the nursery site. This means there is a large enough water supply to provide complete frost protection for all outside compound trees. This

impressively large system greatly reduces the risk of frost damage in the fall and spring.

"We have a lot of great technology," says Bagnell, "but our biggest asset is our staff. They are highly experienced and extremely dedicated. When you add in a favorable climate and our ability to successfully grow a wide variety of products, you have all the ingredients to make PRT Harrop one of the strongest players in the southern BC silviculture industry."

PRT Harrop's internal PRT reliability index for 2009 was 99.5%, a reflection of the hard work and attention to detail of the staff. That attention to detail and the use of leading edge technology has made it possible for PRT Harrop to successfully manage over 500 different seedlot and stocktype combinations in a single season..

PRT Harrop's main customer base is the southern Interior of BC and northwestern United States. PRT Harrop offers a full range of standard seedling products and related nursery services. For more information about PRT Harrop, contact:

Dan Livingston, RPF  
Customer Support Representative  
Cell: (250) 354-8385  
Office: (250) 229-5353 ext. 224  
Email: [dan.livingston@prt.com](mailto:dan.livingston@prt.com)

## GOING GREEN MAKES DOLLARS AND SENSE

PRT is working hard to make our nurseries greener than ever – in every way!

In recent years, these efforts have taken on a new twist as some of our customers have chosen to be certified by the Forest Stewardship Council (FSC). Since 2004, PRT has been working together with FSC-certified customers to reduce the use of chemicals and find environmentally-friendly alternatives for pest management.

FSC is an international organization that supports environmentally-appropriate, socially beneficial, and economically viable management of the world's forests. Founded in 1993, FSC now has over 100 million hectares (247 million acres) in 80 countries that are certified according to FSC standards.

Five PRT nurseries are working within the principles laid out by FSC. This means the nurseries use Integrated Pest Management and silvicultural systems to continually reduce or eliminate the use of chemical pesticides on the seedling crops we grow for our FSC-certified customers.

"We take a number of different approaches to reduce the use of chemicals in our nurseries," says Dan Livingston, Customer Service Representative for PRT. "The key is frequent communication between all parties concerned (Grow Nursery, Customer and CSR) and taking a committed pro-active Integrated Pest Management approach to solving pest problems"

PRT works closely with customers and nurseries to develop action plans annually to reduce chemicals. This can include using alternatives to chemicals which have less of an environmental impact. It also means growing certain crops in different locations because those locations are less susceptible to specific pests.

To date, PRT has managed to show a steady annual decline in chemical use for FSC-certified crops resulting in an overall reduction in the



TEMSEC FOREST  
STEWARDSHIP  
COUNCIL (FSC)  
CERTIFICATION  
PRESENTATION

number of FSC trees treated with chemicals of 37% over the last six years. Not only does this reduce the amount of chemicals used, it ultimately saves money because spraying can be expensive.

Other environmental initiatives being undertaken by PRT include an increased emphasis on recycling. Customers are encouraged to return all boxes to PRT locations where undamaged ones can be reused. Used greenhouse poly is recycled where this service is available or sold within the local community for a variety of uses including crop and construction covering material. As part of the decommissioning of PRT Pelton in Maple Ridge, BC, PRT has treated half a million cull styroblocks so that they can be recycled as moulded plastics in their second life by using a heat densification process and thus reducing the waste disposal in a landfill.

For more information about FSC standards, visit [www.fsccanada.org](http://www.fsccanada.org).

### **Contact Us**

For more information, please visit our website at [www.prtgroup.com](http://www.prtgroup.com)

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