

The Challenges and Accomplishments in Reforesting Boreal Sites in Northern Ontario

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Steve Colombo indicated that many conference goers may not have an understanding of the reforestation industry in Ontario. I have prepared this talk to paint a bit of a picture of how things work in Ontario. It struck me that in my 20 years in the industry, I had never been asked to deliver a talk to a conference such as this. Although reforestation has been going on for decades in Ontario, our industry in its current form had its beginnings in the early 1980s.

As I look around the room I see forestry professionals, scientists and business people all of whom had their own personal path and motivations leading them to their careers in forestry and seedling production.

For me, armed with my degree in history, my diploma in business and my penchant for coaching and working with youth, I stumbled into tree planting. In the mid-80s, I was headed toward a career in coaching alpine skiing. My plan was to use planting earnings not only to feed myself between seasons but also as seed money for other ski career building projects.

The early days were wild compared to today. I began supervising Outland planting projects in 1987. In 1988 I supervised the first 6 weeks of the Great Lakes Forest Products plant on the Black Sturgeon Forest with a cast on my left leg after reconstructive knee surgery. My boss at the time talked me into it and offered me his RV trailer to sleep in. In those days there was very little management capacity out there and I suppose we had no other person with experience to run the project other than myself.

I soon learned that we needed to build on every proven and keen staff member in our organization. The key to our success would be in maintaining a high quality product while increasing production; this would be done by increasing the level of experience in our company.

The true sign of a successful production piecework operation is that people at every level of the organization are making money. This is the basic fundamental that has allowed Outland and other successful planting companies to sustain profitability. Of course one does not continue to make money without addressing the key needs of clients, employees and owners alike. Certainly, for me,

recognizing that my entrepreneurial bent could combine nicely with my coaching and people management skills within an organization like Outland was very exciting. Most people think those of us committed to the industry are crazy, but most people do not really understand what makes a successful tree planting company. My role within Outland as it evolves is vastly rewarding.

The act of planting a tree is a critical step in the process of regenerating the forest. The trees are selected, improved, grown, stored, shipped, watered and delivered to the site. Then we depend on a person to carefully select a microsite and properly plant a tree.

Yet, in our view tree planting is not a science. There are not randomized trials with different planters as there are with different stock types. But just because we cannot produce scientific abstracts on the subject does not mean that it should be overlooked when considering the current state of reforestation. We applaud the seedling production industry for making important technological contributions which are making planting more efficient and producing higher quality results. We also believe that it behoves the forest industry as a whole to understand tree planting from an operational perspective and in its broader contexts. The more forest managers understand about the human side of production planting, its challenges and opportunities, the more we can assure a thriving and competent tree planting industry exists to plant the trees this conference is all about.

In this talk I am going to:

- Have a look at how tree planting in Ontario has evolved in past 15 to 25 years
- Talk about some of the industries challenges and suggest a few ways that things might be streamlined on the ground through closer partnership between silviculture contractors and forest products companies
- Highlight the importance of attracting and maintaining a young, energetic workforce to undertake reforestation

There have been some major changes in the practical, on-the-ground approach to reforesting sites over the past 2 decades. Tree planting first became the industry that we

know in Ontario about 25 years ago when the MNR gave up control of the tree plant programs and began tending reforestation out through the Forest Products Industry. This leap of faith from union workers paid by the hour to young students paid by the tree produced an astounding increase in production rates.

Before the students arrived, the forest industry had daily tree plant production numbers of about 300 per person per day and the per seedling planting rate was effectively 60 cents a tree. When company supervision and overhead costs were factored in it cost well over \$1.00 per seedling in 1978 dollars to plant a tree.

Once high production reforestation contracting companies arrived, the price fell rapidly and forestry companies realized they had made one of their best decisions ever. No more WCB claims, no more employee issues and planting costs of 25 cents a tree or less. New approaches to achieving higher production originated in BC where new planting techniques and land management systems paved the way for greater maximization of the pay-per-tree model.

For contractors tree planting prices have not moved much since then – if anything, they have slowly decreased in real terms. Yet behind the scenes, the tree planting industry continues to evolve. Production rates continue to climb. Our records show that twenty years ago a camp would average 1,200 seedlings per day over a season with average earnings of approximately \$100 per day. Now an average Ontario camp is in the 2,000 seedlings/person/day range with average earnings of more like \$175 per day.

In recent years, productivity gains can be largely attributed to a focus by the silviculture industry on a variety of factors: safety in the workplace, planting ergonomics – leading to reductions in lost time, more reliable crew transportation and access equipment allow planters to have longer and more consistent work days. On-site tree delivery is an ever-evolving art and particularly important with diminished road building of late. We have made steady improvements to our quadrunner configurations resulting in far less downtime and much better performance under load. In addition, most planting companies invest a great deal of time and money in hiring, informing, preparing and training the best people for the job to be efficient and productive workers.

Massive productivity increases are not the only significant changes in the modern planting camp. Planting life has changed a great deal from the early days of primitive infrastructure and haphazard quality control.

With the increased focus from the Ministry of Labour, WSIB and forest industry clients, reforestation contractors have improved bush camp facilities to comply with regulations, provide better accommodations and facilities to their workers and provide better service and reporting to forest products companies. Gone are the days of 10 to 15 person work camps, living in tents, drinking lake water and cooking their own meals on Coleman camp stoves. Today's tree planting camps have well structured and organized management teams and offer most of the amenities of home with a "rustic twist".

Visit a tree planting camp now and you will likely see functional combinations of the following elements:

- Fully functional bush camps with water purification systems, generators and propane cooking equipment
- Radios, cell phones, satellite phones, pagers and internet access.
- Handheld GPS Units, Laptops, Printers, ArcView and map making capability
- Televisions, DVD Players, Satellite dishes
- Garbage containment, Electric Bear Fencing
- 4x4 Crew Cabs, 15 Passenger Vans, Float Trailers, Quadrunners, Swamp Machines, Helicopters (and yes there are still a few battle scarred school buses plying the northern bush roads!)
- Adjustable, well-padded tree planting bags, ergonomically designed planting shovels, hard hats, Hi-Visibility vests, steel-toed boots, and Gortex raingear
- Silvicool tarps, shade tarps, tree-watering systems
- Contractors that are SWO safety certified, ISO certified and compliant with all Environmental Management Systems and Certifications in place with our clients

Operational changes in production, packaging and transport of tree seedlings represent another major contributor to improved productivity over the years.

The changes in stock types, packaging and transport have allowed silviculture contractors to move more seedlings from the nursery to the site in a shorter period of time, store trees on site for longer periods of time and spend less time in the field tending to seedlings prior to planting, ultimately resulting in an increase in planter productivity.

The move by the industry away from bare root planting stock, to container planting stock has simplified the process of planting a tree for planters. Bagging up and drawing trees from planting bags takes less time with bundled container stock than with bareroot. Shovel blades have reduced in size in response to a diminished need for a large planting hole to accommodate fairly large bareroot root systems. Loaded tree bags weight less, or carry more trees as the requirement to have water in the bottom of planting bags to maintain root moisture no longer exists. And tree planters are able to achieve quality specifications more easily now that putting the tree in the hole is one simple movement with no fussing with stray roots.

Most trees planted in northwestern Ontario are now extracted from their growing container, bundled, packaged in boxes or totes and put in cold storage awaiting delivery to the planting site. The delivery of seedlings to the site in their growing trays poses several hardships to the planting contractor. Trees transported in trays take up significantly more space than those packaged in boxes or totes – requiring more frequent deliveries from the nursery to the site and from the staging site to the planting blocks. Every load of trees to the site requires staff resulting in the loss of valuable production time unloading and loading trees. Movement of trays require heavy and cumbersome racks in reefers and on trucks, trailers and quads. Daily watering regimes mean watering equipment needs to be maintained at staging areas and planting sites.

Extracted, bundled and cold stored trees have provided planting contractors with a great deal of flexibility within their operations. Most trees can be packed in containers of 400 to 600 trees, allowing contractors to deliver more trees to the planting site per load and minimize delivery times. Seedling delivery to difficult access areas can be accomplished much more efficiently and with a lot less frustration with trees packaged and protected in easy-to-manoeuvre containers. Trees can be cold stored in on-site reefers for longer periods of time with no watering required. Most boxes and totes are collapsible or stackable for easier return of shipping containers to the nursery. All in all recent seedling packaging and storage technologies have contributed significantly to overall productivity gains and to keeping renewal costs down.

The ever-tightening business environment the forest industry has faced over the last 15 to 20 years has forced tree planting companies to evolve in order to survive. Gone are the days when planting company owners could sustain the business on planting work alone. We have utilized our core competencies and are always reaching out for other business opportunities. Ultimately, we

have been able to streamline costs and provide greater earnings opportunities to our best staff. Outland has recognized the need to be a high volume producer in order to survive. Over the past two decades, just like the pulp and paper industry tree planting companies have undergone serious consolidation. Outland is now one of Canada's largest suppliers of planting services. We have spread our operations over many jurisdictions, which has allowed us to weather the tough times in certain market areas. As you can see at our booth in the display area, we are contracting our services in many facets of the silviculture industry including slash pile burning, juvenile spacing and herbicide applications. Further, we have become a large supplier of Type 2 forest fire fighting crews to various provinces. As well, our experience in running bush camps has led us nicely into Project Fire Basecamp services for several provinces. All of this growth and streamlining of cost inputs across all operations has ensured our ability to continue providing excellent value to the tree planting industry while maintaining overall profitability and extending employment opportunities for our seasonal employees.

Outland has done an excellent job of integrating FN workers into their operations. In fact, recognizing the growing population of First Nations in the north and recognizing the forest industry's looming shortage of skilled workers, Outland is working to increase involvement by First Nations in all aspects our business here in Northern Ontario. We have established capacity building partnerships with various First Nations and we conduct silviculture training programs on behalf of our clients. Consistent with the priorities of First Nation leadership, our focus has been largely on youth. Our workplaces and management teams are geared toward getting the best out of people. We have been most successful when we hire and train these workers with their own peer group – that is, young university students that are interested in training and teaching. A further benefit stems from the fact that silviculture contractors have been able to step-in to carry out this work without any previous conflicts or complicated relationships and have achieved some important successes on this front.

There have been many lessons learned in the tree plant contracting process. We believe that within the realm of project management, opportunities exist for new approaches that would further help streamline our tree planting business while maintaining desired results.

Perhaps the greatest challenge faced by planting contractors is the lack of consistency from licence to licence with respect to quality and density specifications.

After having planted trees for every major forest company in Ontario we are certainly qualified to make this assertion.

In our practical experience every client has a different take on what quality specifications are required to produce a good plantation. This is probably the most frustrating aspect of our business. Constant retraining from project to project hampers productivity and morale. Currently each company has slight variations on reporting procedures, quality sampling regimes, and different levels of experience among their on-the-ground company staff overseeing the tree plants. The differences we see often come from client preference. Differences that often result in costly slowdowns. Slowdowns that can seriously affect a planter's ability earn enough money for school. If quality specifications were consistent on the same site conditions from contract to contract re-training periods would be minimized contributing once again to controlling renewal costs.

As I have said earlier, planting contractors believe they have responded remarkably to industry's pressure to keep renewal costs down over the years. We understand the challenges the forest industry faces and believe we are doing our part. In spite of well known razor thin margins, best practices within our industry have improved steadily. Somehow, contractors have not been successful at getting the forest industry to look beyond the narrow framework of cost – to look at planting in a different manner. We believe various opportunities exist which would allow forest companies to get much more out of their renewal budgets.

First, look at contractors more as partners in the reforestation process. When we started in this business 25 years ago, MNR foresters ran tree planting. Now, our clients run the planting programs and are subsequently audited by government. We believe this evolution could be taken one step further. Planting contractors can run the entire planting program with appropriate and timely auditing to verify contract requirements are being met. Some of our clients are currently employing this contract management approach today. Our management staff have the experience to layout a planting project, coordinate stock shipments, care for the stock on site, coordinate project flow, assess quality & prepare all associated reports. The operational efficiencies found with this approach will further maximize the renewal dollar. Contractors will respond to the added responsibilities and contractor capacity to efficiently deliver other forestry services will grow as well.

Second, offer contractors longer planting seasons. From our perspective the industry should consider at least 2 to 2.5 months worth of planting work during the summer. If our industry wants the best labour force, we need to be able to offer enough work. There is a big difference between 3-5 weeks and 7-10 when it comes to hiring qualified planters. The vast majority of our seasonal workers participate in this industry because they are trying to make money to pay for school or travel. If we cut up their summer earnings window too much we inevitably lose good people who opt for steadier work. The \$175 per day earned by average planters today does not go as far as the \$100 per day 20 years ago. We all know how tuition and accommodation costs have risen dramatically over this period. The bottom line going forward: planting earnings must remain competitive with comparable work. Managing the planting windows with this consideration in mind will go a long way to attracting the most productive workers. This will lead to contractors hiring fewer people which will ultimately reduce risk. Rookie planters usually earn more in their last 2 weeks of a 6-week plant than they do in the first 4 weeks. Once planters are up to speed by mid June, this is the time contractors can offer more attractive pricing on projects.

Third, sign longer term deals. Most contractors operate at very tight margins. It is becoming increasingly difficult to operate on a year to year basis. A series of 3 to 5 year deals would guarantee exceptional pricing. Clients would also see how much easier it is on everyone when planters and management teams get to return to the same place for a few years in a row. Another hidden benefit companies feel is through the loyalty planters often develop for the sustainable forest license (SFL) holder they are planting for.

Reforestation companies are labour intensive operations that introduce a great number of people to the forest industry for the first time. How should this interaction be managed so that the young workers appreciate the forestry company priorities and challenges?

Forest industry professionals need to take advantage of the chance to meet our planters. It is a very interesting group that goes planting. They are generally all highly motivated. Today's crews are mostly a good mix of Northern Ontario and Southern Ontario college and university students. As well, we are seeing more and more First Nations planters joining our crews. This is an ideal chance for industry to "put out its message" to an open-minded and keen group – and a group that inevitably includes tomorrow's decision makers. Who has planted trees? You would be surprised at how many high

profile professionals, artists, politicians and the like have spent a summer planting in Northern Ontario. Shania Twain is the extreme example we all love to refer to. No doubt, some of you in this room have planted trees!

Across Canada, upwards of 5,000 tree planters head to the bush each year to plant trees. Some foresters seize the chance to come and talk for half an hour about what their companies do – almost all of our staff comment about what a good session it is. Others do not ever come to the field – an opportunity lost in our view. We strongly believe the industry needs to do more to reach the community at large. Certainly, a willing group of planters who have gone through the blood, sweat and tears it takes to make it through a planting season deserve to hear the forest company's messages as well as have a chance to ask some questions.

There are no doubt many success stories that have come from reforestation contractors and forestry companies working closely together resulting in the general improvement of the caliber of the planting companies. The forestry world is full of SFL foresters who do care enormously about the reforestation workers and contractors. At Outland, we have been mentored by some excellent leaders from industry that have demonstrated to us the lessons that they have learned from working in their organizations:

- Lessons such as the benefits of taking an unwavering stand on safety and...
- The importance of standardized practices as one's organization grows and becomes more complex.

We know that we have a core competence that is different from that of our clients. We are labour management

organizations. As this talk has hopefully shown we have grown in sophistication and ability over the past 20 years. We deliver excellent value for the dollars spent on our services and we have much more to offer.

On a final note, we believe the forest industry faces challenges which are changing the importance of the role of silviculture in providing a sustainable supply of willing and skilled forest workers. We will see much more involvement in our industry by First Nations as they build capacity to take back some of the economic opportunities they have been missing over the past decades. Our industry also provides a window on the north for many "southern Canadians". If the forest industry treats these workers well, we may see our northern colleges and universities filling up with young people who can see a future in sustainable forest management. Tree planting can be a first step in one's eventual decision to live, work and raise families in the north.

Tree planters want to play a role in renewing the environment. If they can pay for college while making this contribution it is a huge win for society. Compare this approach to our US neighbours who rely on low cost Mexican workforce to do its manual planting and tending. It is the job of all of us in this room to look for ways to keep interest high in piecework silviculture. Giving more and more people a positive experience in the north will help ensure the forest industry gather the support it needs to carry-on managing sustainably in the years to come. Going forward to 2010 and beyond the focus of reforestation companies such as ours along with our industry partners will be to balance economics with the very human opportunities we have before us.