





The negative aftermath of typical diameter limit cuts.

WHY IS DIAMETER-LIMIT CUTTING SO BAD?

DLC is not a recommended silvicultural treatment as it tends to remove those trees that are healthier, larger, and growing faster than what is left behind. Used repeatedly DLCs degrade genetics, forest health, species diversity, and the sustainability of the woodlot. Early in my career I heard a harsh analogy: “a DLC is like using the losers in a horse race as your breeding stock and sending the winners to the glue factory”. Genetics are very important. An important consideration for all silviculture systems is where your seed and next generation is coming from. For example, the selection system favours the development of healthy, high-quality trees while removing diseased and low vigour trees. DLC is the reverse of this, where the poorest trees are left behind to reproduce. The shelterwood silvicultural system also carefully cultivates the best trees as the seed producers. These superior overstory trees are thinned to provide appropriate light and increased seed production. The end of rotation, “removal cut” under shelterwood may look like a DLC to some, as most of the largest trees are removed, but this is only after multiple treatments (thinning,

planting, tending, etc.) and only when the new cohort is fully regenerated and “free to grow”. Silviculture, practiced properly, using accepted methods with qualified professionals and trained tree markers, results in sustainably managed forests. DLC is not part of that culture.

ARE TREE BYLAWS WORKING?

Over the first 30 years of the Trees Act, it was the larger, more urbanized municipalities who passed bylaws. These bylaws met the initial goal of keeping woodlots on the land; however, they also legitimized the use of DLC as an acceptable forest harvesting method. Over-harvesting continued to be a problem, and beginning in the 1980s development pressures (primarily in the GTA) resulted in the loss of many woodlots - “Trees Act” bylaws were becoming difficult to enforce and outdated.

In the early 1990s, I was part of a group that included Mike Rosen, R.P.F. and other MNR and municipal experts. We worked with provincial lawyers on a template for municipalities wishing to pass bylaws or improve existing ones. With a focus on modernizing these regulations, we communicated with municipalities, and hosted bylaw officer training courses.

A new idea, was to have bylaws that required landowners (and loggers) to follow a “good forestry practices” (GFP) approach when harvesting in woodlands. In this case, through a permitting process, the landowner needed to prove they were practicing “good forestry” before harvesting would be allowed. This would often include: Registered Professional Forester (R.P.F.) approved prescriptions, tree marking by qualified tree markers and restrictions on the timing of operations.

Over the past 35 years, new bylaws were passed (now under the Municipal Act), new bylaw officers (some R.P.F.s) were hired, a committee of provincial municipal tree conservation bylaw officers was created (meeting annually for past 25 years) and the overall need for and understanding of tree conservation bylaws improved within the community.

Unfortunately, the details are not so rosy. Fortunately, a few municipalities have bylaws that are regulated entirely through GFP. Some still use DLC regulations and there are many municipalities that have no tree conservation bylaw at all. Most municipalities, however, allow a landowner to choose to harvest with

either a DLC or by following GFP. This has resulted in far too many DLCs. The root cause is that the two legal approaches have different up-front costs, and many landowners are unaware of how each affects the health, sustainability, and long-term economics of their woodlot. One approach, GFP, requires accepted sustainable forest management but has costs for planning, prescription writing, and tree marking, and the other, DLC, is an unsustainable administrative practice that degrades woodlands and only requires a diameter tape and no R.P.F.s or tree markers.

Our study of tree cutting permits in Huron and Perth Counties showed that landowners were choosing DLC over GFP. There were 1,108 tree cutting permits (with 7,714 ha of harvested area) issued between 1997 and 1999, only 8% of the woodlands were harvested using a recognized silvicultural system and the rest were DLCs or hybrids (Schwan and Elliott, 2010). One of the worst scenarios is where a woodlot managed long-term (25-30+ years) under the selection system is then cut to the diameter-limit by a new landowner. The beautiful large trees restored and grown through the selection system, vanish in one cut. Add to the mix, an unscrupulous logger, who underpays the landowner and also causes damage to the residuals, and the past 30 years of dedicated silviculture are lost, and recovery will take up to an additional 40 or 50 years. Adding GFP to the regulation system for tree conservation bylaws was a good first step and the benefits are clear, however allowing DLCs to legally persist is clearly at odds with this. In my opinion and that of all of my colleagues, the DLC option should be removed from current and future bylaws.

THE END OF THE DIAMETER-LIMIT CUTTING ERA

The province mostly stopped using DLC on Crown lands in the 1970s. They are not found in the provincial silvicultural



A well managed forest stand under the Single Tree Selection Silvicultural System.

guidelines, other than to mention that they are a bad practice and should not be used. The provincial Managed Forest Tax Incentive Program (MFTIP) has an outright ban on the use of DLCs and high-grading. Landowners who use these approaches, may be removed from the program and be required to pay back the taxes that the program had saved them. All the existing forest certification schemes require that practices follow accepted standards and do not condone the use DLCs.

Good forestry practice and effective silviculture are grounded in emulating natural ecological processes. A farmer or maple syrup producer who knows their woodlot and understands basic forest ecology and genetics will strive to keep healthy mature seed trees, maintain biodiversity, create opportunities for regeneration, discourage invasive species, and maintain wildlife habitat while protecting wetlands and water features. Many of these folks and other woodlot owners seek further learning and join groups like the OWA while hiring R.P.F.s to help

with management planning, prescription writing and operations. Unsustainable DLCs are no longer acceptable and their continued use in Ontario's woodlands disrespects the forests and the large number of neighbouring high calibre forest stewards that Ontario is so lucky to have. The time has come to finally leave diameter-limit cutting behind.

REFERENCES

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