Larch Virtual Experiment Station Research Note #6

Operational Larch Plantations in Pleasant Ridge

By David Maass

Ken Laustsen and I measured two hybrid larch plantations in Pleasant Ridge on August 9th 2018. These were apparent operational plantations on good soils. Both plantations had been thinned. The first was a block that had been left as a buffer between two adjacent clearcuts. Rows at very wide spacings had been cut through the plantation. The second had had row thinnings at wide intervals.

The first plantation was a south facing slope and the second faced northeast. Both plantations had been planted on Peru-Colonel-Rawsonville soils on 3-15% slopes. This is a generally deep and well-drained till soil. This soil type has the following parameters:

Soil name	Consistency	Depth	Drainage	Parent material
Peru very stony	Fine sandy loam	21” to 43” to densic material	Well drained	loamy lodgement material from granite and/or mica schist and/or phylitite
Colonel	Fine sandy loam	12” to 24” to densic material	Somewhat poorly drained	Coarse loamy lodgement material from granite and gneiss and/or mica schist
Rawsonville	Fine sandy loam	20” to 40” to linthic bedrock	Well drained	Coarse loamy supraglacial meltout till from granite and gneiss

Both plantations were cruised with four plots using a 20 BAF prism. Plots were taken in fully stocked portions of the stands. Diameter was measured using a d-tape at breast height to the nearest 0.1 inches. Height was estimated on all selected trees using a Suunto Clinometer and using the topographic scale. Height was estimated to the nearest foot.

The landowner, Weyerhaeuser, cooperatively, provided year of plantation establishment for both plantations.

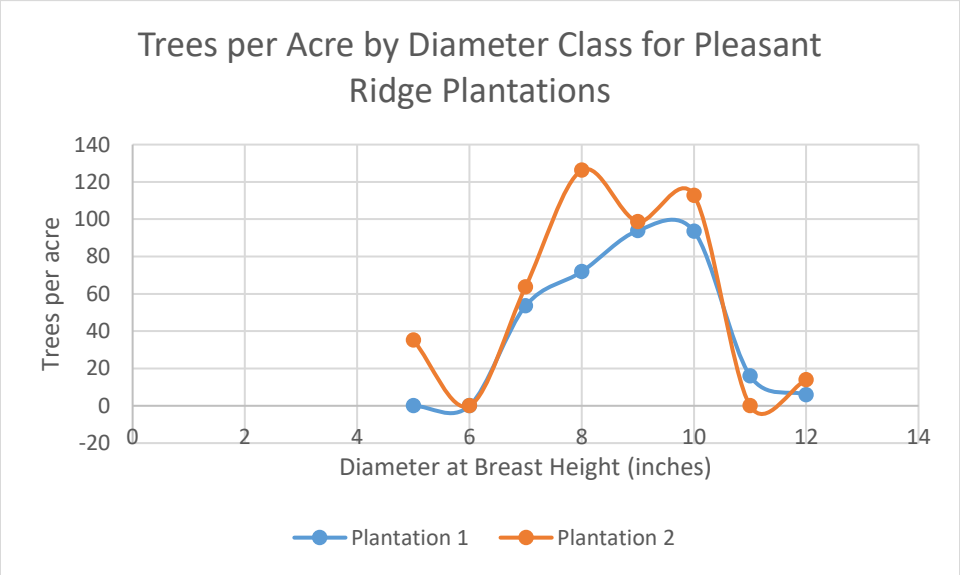
Volume calculations were made using Kozak taper volume equations (Li 2012) using hybrid larch parameters as provided by Aaron Weiskitteil’s tech. English dimensions of diameter and height were converted to metric dimensions, run through macro to calculate volumes in cubic meters. These were then converted to cubic feet (35.31 ft^3/m^3). Merchantable volumes were calculated to a 3” (9 cm) top diameter above a 6” (.15 m) stump. Cords were computed at 85 ft^3 per cord. Tons were computed at 48 pounds per cubic foot and 2000 pounds per cord.

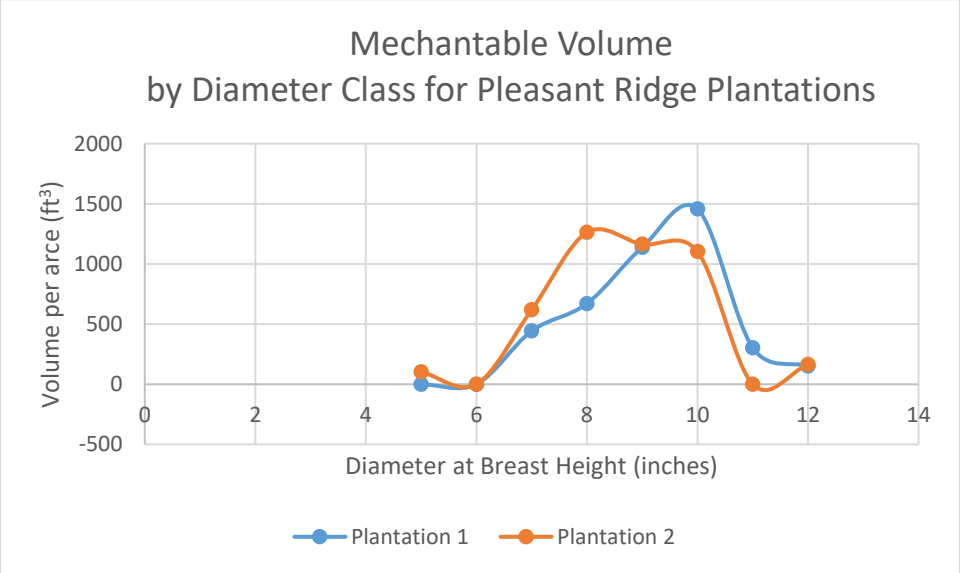
Summary of the data is as follows:

Table1: Summary of two plantations in Pleasant Ridge, ME

Plant.	Age	Tpa	BA/ac	QMD	Ht (ft)	Merch vol (ft^3/ ac)	Cords/ ac	Merch tons/ac	MAI (ft3/ac / yr)	MAI (cords/ac / yr)	MAI (tons/ ac/yr)	MAI m3/ha/yr
1	24	335	145	9.3	63	4164	49.0	100	173.5	2.0	4.2	12.1
2	21	451	140	7.9	53	4415	51.9	106	210.2	2.5	5.0	14.7

Charts 1 and 2 below demonstration the trees per acre and volume per acre by diameter class.





RESULTS

Both plantations, despite small age differences, had similar profiles in trees per acre and volume by diameter class. Both demonstrated that they had sawlogs volumes available at measured ages despite not having been thinned.

REFERENCES

Li et al, 2012, Regional Stem Taper Equations for Eleven Conifers in the Acadia Region of North America Development and Assessment. NJAF 29(1)5-14.