

## Wood Quality Study

This summer, we concentrated on lumber stiffness testing. The dimensional lumber that had been milled from our study logs was kiln-dried and measured. Boards from each log were realigned, and rings were counted, starting at the pith, in order to determine the ring age of the wood in each board. We then carried out 3 testing procedures on each board:

lumber bending test: this procedure gives the direct modulus of elasticity (MOE), to which all of our indirect stiffness measures (taken in the field on logs and standing trees, and in the lab on boards) will be compared

longitudinal stress wave: this test measures the speed of longitudinal stress waves, which travel faster through denser wood; this gives an indirect measure of wood stiffness

transverse vibration: this is another indirect method of estimating wood stiffness, in which the damping time of a transversely vibrating board is measured, with vibrations ceasing more rapidly in denser wood



Tree heights were also measured in the thinned progeny tests this summer. Marilyn was invited to give an update of our recent activities at the NWTIC Annual Meeting on September 21, 2006.

## Miniaturized Seed Orchard Study

In August, we visited Jeff DeBell to view the WADNR's mechanized pruning apparatus. Rocky Oster demonstrated the tractor-mounted sickle bar attachment in their Douglas-fir seed orchard. The machine can be set to cut horizontally, vertically, or any angle in-between, so both topping and lateral pruning may be carried out. We were impressed by how easily and rapidly an orchard could be pruned using this equipment. Moderately-sized branches did not pose any problems for the cutting teeth. The main consideration in using the attachment with any tractor is that mounting modifications are needed. We are planning to transport Jeff's apparatus to our miniaturized seed orchard next summer to carry out some pruning treatments.

