

Crown Land presentation – JEAN ARNOLD

FBC is a community development and education centre in Carleton County. We have a forestry program that focuses on sustainable management, restoration and protection of forests. FBC is part of a group of Woodlot Owners that are certified under The Forest Stewardship Council, the first group certification system in Canada. FBC coordinated the endorsed Maritimes Forest Management standards for FSC; regional standards as part of the international certification process. We also coordinate the international Non-timber Forest Product (NTFP) working group, a coalition of organizations from around the world working on sustainable harvesting and markets for NTFPs. We are also the Northern coordination for the Analag Forestry Network, a system of forestry that restores degraded landscapes, and we are a member of the Easter Canada ground hemlock working group

I am sure you have heard many competing arguments for why or why not to accept the JP report to double the annual allowable cut in N.B. I would like to address 2 aspects in my presentation

1. Plantations – ecological effects of conversions
2. Tenure – revised, open up tenures

Conversion of Natural Forests to Plantations: What is being advocated is two-fold, open up protected areas for immediate cutting and converts natural forest via clear cutting to softwood plantations for pulp. JP recommends the conversion of 40% of NB's crown lands to plantations. Around the world, corporations are heralding forest plantations as the way to satisfy future demands for pulp and paper supply. The bulk of this effort is focused on the tropics due to lower labour costs and the long growing season. Canada was signatory to the Convention on Biodiversity. Provinces have agreed to put some areas under special mgt zones. We have less than 4 percent in actual protected areas, everywhere else under special management zones (24%) can be harvested, although not clearcut. NB falls below the 12% signed by Canada at the Convention on Biodiversity. Others will have argued more knowledgeably than I about these protected areas.

My focus is the detrimental effects of converting natural forests to tree cropping. Through most of NB we have a rich Acadian Hardwood-Coniferous forest, with maple, birch and beech, white and black spruce, balsam fir, pine hemlock and cedar. The proportions of these various species vary from location to location depending on soils, slope and altitude.

When I first arrived in NB and purchased 200 acres of hardwoods, and not knowing then much about the forestry I asked a forest extension worker to come out, walk the property and advise me. He suggested cutting down all the hardwoods and letting the softwoods develop. He looked at the forest for fibre management, for fast income. At that time I was co-manager of a hardwood furniture company and although not knowing much about Canadian forests this seemed to me to be a rash move. Hence I did not cut down the hardwood ridge and it has continued to provide a good source of hardwood lumber, some veneer, firewood and maple syrup.

There are many important components of a healthy forest ecosystem. We can begin by looking at the soil. **The forest soil** contains nutrients, many microorganisms, tiny creatures that feed on and

break down the leaf litter, and somewhat larger creatures such as salamanders that are important parts of the food web. The way trees are harvested can affect all of these components.

Scientists have concluded that calcium is in danger of being depleted from forest soils, due to the combined effects of acid rain and whole-tree clear-cutting on 40-year rotations. Magnesium and potassium are also in danger of depletion. Whole-tree harvests remove the entire above-ground portion of trees, including the tops, which contain more than half of the nutrients. Nutrients also leach from the soil after it is exposed by clear-cutting.

Research has shown that sixteen years after a whole-tree harvest, an area that was clear-cut has 25% less organic matter in the soil than adjacent unharvested plots. The level of organic matter in the soil is important for nutrient cycling, water-holding ability, and other properties important for plant growth.

Among the many important microorganisms in the forest soil are mycorrhizal fungi. Mycorrhizal fungi form associations with the roots of trees and enhance tree growth in various ways. It has been known for some time that these fungi can form networks between the roots of different trees, even between trees of different species. Recently, researchers in British Columbia made an important breakthrough in understanding the ecological significance of these fungal-tree communities. They showed that seedlings of Douglas fir grown in the shade of paper birch received a net transfer of carbon from the birch trees through the fungal connections. This research shows that in a natural forest ecosystem, trees such as paper birch, considered a "weed" species by foresters, may nourish other tree species such as the commercially valuable Douglas fir. These complex interactions may help stabilize the forest ecosystem in the long run and help protect against extremes of moisture, temperature, and against insect outbreaks and disease. Unfortunately, intensive forest management techniques such as clearcutting and herbicide spraying disrupt these complex and beneficial associations between trees and fungi.

Plants that are not trees, but that grow in the understory of forests play important roles in the forest ecosystem. For example, the trout lily is a widespread forest plant that grows actively in the spring during the period extending from snowmelt until the canopy develops and shades the forest floor. One study found that these small plants incorporate significant amounts of potassium and nitrogen into their tissues during their period of active growth in early spring. If these plants were not present, those nutrients might be lost by leaching from the forest soil during snowmelt and spring runoff. Later in midsummer, the aboveground portions of the trout lily die back and release those nutrients into the soil from which they can be taken up by trees and other plant life.

There are also good reasons to have a **diversity of tree species** in our forests. For example, research conducted in New Brunswick showed that the presence of greater than 40 percent hardwoods in mixed balsam fir-hardwood stands could substantially reduce losses during spruce budworm outbreaks, possibly because the presence of greater hardwood content increased the abundance of natural enemies of the budworm such as birds. In spite of such evidence, the paper companies insist on clear-cutting which results in even-aged stands of fir (the preferred food of the budworm), and on spraying herbicides to limit the regrowth of hardwoods.

In a study published in 1989, researchers found that **birds** exert controls on low-density budworm populations. The largest and most important group of predators was the canopy-

feeding wood warblers including Blackburnian, Cape May, Bay-breasted, Yellow-rumped, Magnolia and Black-throated Green Warblers, as well as the Golden-crowned Kinglet. Suitable habitat for these species must be maintained, including a significant hardwood component, and well-developed canopy and subcanopy layers. Unfortunately, intensive forest practices destroy this essential habitat features.

Other research, conducted in New Brunswick and published in 1994, showed that clearcutting, intensive silviculture, and single-species tree plantations, reduced habitat diversity and decreased the density and diversity of breeding birds.

In summary, there is a large body of scientific evidence which shows that intensive forest practices such as whole-tree clearcutting on short rotations, herbicide spraying, and the establishment of tree plantations, have adverse effects on all aspects of the forest ecosystem, and we believe these practices threaten the long term health and productivity of our forestlands.

Aside from the ecological effects of converting mixed species forest to tree crops, there is also the requirement that these tree crops require heavy doses of **herbicides and pesticides** in order to grow successfully in this unnatural imbalanced system and to counteract the desire of the forest ecosystem to restore balance.

Herbicides and pesticides do travel downstream, no matter what the forest industry tries to deny. We all live downstream, our water is precious and people in rural communities do not want to be subject to the annual aerial herbicide spraying.

Through our work with **Non-timber forest products** it is clear that there is a range of understorey species that are beginning to find new markets. Ground hemlock, taxus canadensis, produces taxol, a reputed cancer cure. As our society matures and learns more about the complex web of life that is our forest, there will be more medicines and nTPFS which bring other economic returns. Our current focus is just on tree. Tree make up only approx 5% of the diversity in a forest. Forestry has practiced fibre management of trees; very little knowledge exists about the functioning and properties of other sub-canopy species.

Converting these complex ecosystems, nature's lungs and nature's cleansing system for tree crops to feed the pulp and industry greed seems a poor choice. Converting complex ecosystems for pulp coming from these Northern climates is a waste of time and resources. Places in the Third World are increasingly able to provide pulp and with faster growing trees and lower overhead costs, by the time new tree crops reach maturity we may very well be excluded from the market place for cheap fibre.

Don Roberts, Managing **Director of Global Paper and Forest Equity Research with CIBC World Markets** points out that "while there may be some regional shortages of wood in places like Eastern Canada, there is no shortage of wood in the world as a whole. We have to be careful about how much money we spend growing trees because the real price of wood fibre is declining. We might be better off investing in things like schools and infrastructure...which will better improve our competitiveness"

Our niche is value added products, higher forest employment and Crown Land managed by the people of NB for the people of NB, managing our Acadian Forest for a variety of forest values; clean drinking water, scenic and recreational as well as economic returns..

Tenure system: Currently we have 6 licensees who have the right to harvest on crown land and the right to sub contract to 70+ sub-licensees. These licensees are all foreign owned but one. These companies respond to share-holders desires in far away places for high profits. Increasingly the mills and forest operations are becoming mechanized; hence the number of direct or indirect jobs from the forest industry is declining and will continue to decline. The one NB Crown Land licensee is JD who sees NB as their personal fiefdom. Considered one of the world's wealthiest families, they have done this primarily from the natural resources of NB. Do the equation, wealthiest family, poorest province. How long do we stay hostage to middle European feudalism in the 21st century? When will we have the courage to say to the JD Irving family "enough is enough".

The tenure system must be opened up for review. Who can tell us how much profit the companies make off crown land, who can tell us exactly what revenue comes into the NB government? Some say the 'royalties do not even pay for the operation of the DNR? Who can tell us exactly how much revenue goes to the companies in terms of subsidies. The mill near my workplace is closing down again, how many times the taxpayer has bailed out the company to keep employment. Frazer is operating a non profitable venture, which can only become profitable if we the taxpayers bail them out from time to time.

Tenure should be for New Brunswickers, managed at a regional level with mutlti-stakeholder boards of residents and specialists and with forest managers, planning for the long term needs of the area and the employment of its people. Examples of community forest abound, even in Mexico where we have a piece of work the tenure system is developed at the regional and local system and the forests are managed by the communities with well developed management governance and forest management plans.

Instead of commissioning a study (again by overseas 'experts' ..was there no reputable company in Canada?) to determine how the forest industry can double its greed, we should have a study which reviews the current tenure system and determines if a more suitable system might be recommended.

Why are we giving away our heritage to companies who are not interested in managing our heritage? We are merely guardians and users of a forest that has sustained the economy in the past and will need to sustain parts of the economy in the future. We are producing for pulp and fibre, the lowest common denominator. Why not support many small mills, milling different species, furniture makers, flooring, siding, windows, school furniture, barrels, musical instruments, maple syrup producers, fine lumber, shingles and shakes. Keeping our rural economy and way of life viable.

So, I say no to converting our Crown Lands to Plantations, No to the herbicides and pesticides that follow and Yes to Crown Land Tenure reform. Thank you.

Jean Arnold