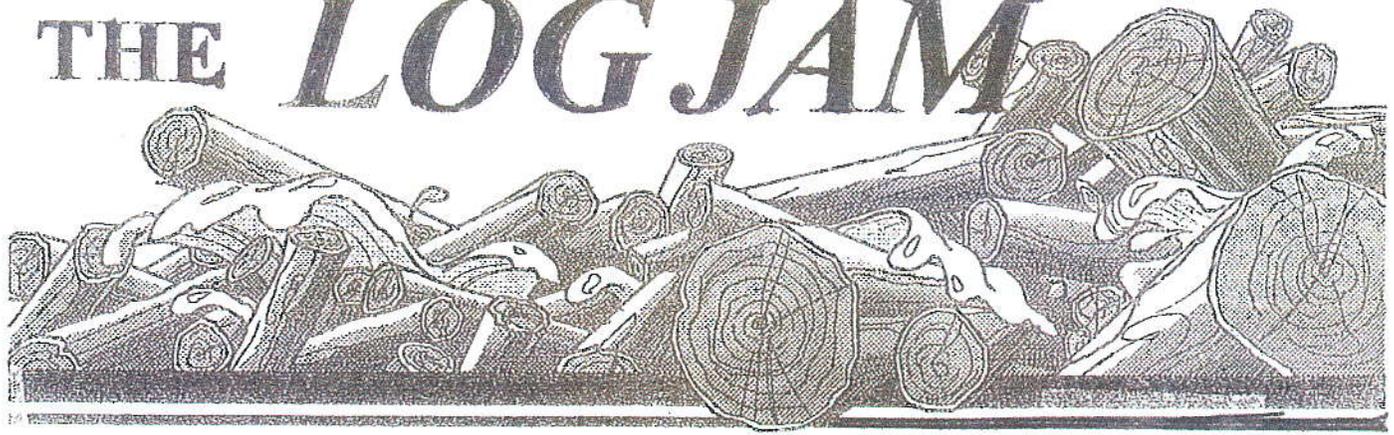


THE LOGJAM



Published by the Woodlot Association of Alberta (WAA)

June 2013



Our Mission Statement :

"The Woodlot Association of Alberta's purpose is to promote leadership in sustainable forest management by encouraging the development of private forest by increasing awareness of their inherent social, economic and environmental values."

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Presidents Message - June 2013

Peter Mills, President

Hello everyone;

I trust everyone has been busy with their early summer woodlot work. Those doing spring planting probably have it completed by the time you read this and I'm sure everyone else has a long to-do list. I'm not entirely sure how the rest of the province fared but I know that we had some horrendous winds a few weeks ago that have caused all sorts of blowdown. I'm writing a short article on how we dealt with that so hopefully I'll have it done in time for this issue.

The other major item I wanted to touch on is the NEW WAA WEBSITE!! I'll be writing a short article on this as well however the best thing is to take a look at it. Simply log into www.woodlot.org on the nearest computer and have a look. We are still adding and modifying content (please see the article) so your opinions are really valuable at this time. It's our hope that this site will not only provide internal communication but raise our profile with other folks with woodlot interests across Canada.

Hopefully you'll also find something of interest in this issue to help you along with some of the summer chores and maybe a think piece or two with other opinions and regional concerns. It may sound like a broken record but this is your organization and magazine so should there be questions you'd like to see answered, articles that you would like to see or better still that you would like to write please (or co-write with someone else) don't hesitate to contact our editor, Jurgen Moll, myself or any of the other board members.

In the meantime if there is anything that either I or any of the other directors can help you with please don't hesitate to contact us or the WAA office.

Labor is rest from the sorrow that greet us;
Rest from all petty vexations that meet us,
Rest from sin-promptings that ever entreat us,
Rest from world-sirens that hire us to ill.
Work - and pure slumber shall wait on thy pillow;
Work - thou shalt ride over Cares coming billow;
Lie not down wearied 'neath Woe's weeping willow!
Work with a stout heart and resolute will!

-Frances S. Osgood

APPLICATION for LIFE TIME MEMBERSHIP

At the last AGM a resolution was passed to institute a Life Time Membership (LTM) for those who have:

- a) Been a member in good standing of the WAA for 10 years.
- b) Are 75 years old.
- c) If disabled or ill and unable to work the age restriction would not be used and the LTM could be given at any age, as long as the length of member is met.

In order to issue these LTM in an orderly manner the board has set the following system for those who meet the criteria to make application for the LTM.

- 1) Members who meet the criteria and which to become a LTM should write a letter to our office stating a) their date of birth b) the date they became a member of the WAA.
- 2) These applications will be reviewed by the board prior to the upcoming AGM and will invite the applicants to attend the AGM where the LTM will be presented. For those who are unable to attend their certificate will be mailed to them.

We would like to get a picture of the member and his/her spouse along with a bio to print in the Log Jam

Just a reminder that the WAA administration will not initiate applications for members who meet the criteria. It will be up to members to make their own application for LTM.

I am only one ,
But I am one.
I can not do everything,
But I can do something.
What I can do I ought to do;
And what I ought to do
By the grace of God I will do.

NEWS FROM YOUR WAA BOARD

Take a look at our new website!

www.Woodlot.org

Pete Mills has done a great job on it, working with our new website host. WAA members can post items on it – just contact Pete at pssbd@telus.net or 780-354-8226.

How to apply for free Lifetime Membership

As we mentioned in our last LogJam, WAA members can apply to receive a free lifetime membership in the WAA if they have been a WAA member for 10 years and are either 75 or older or disabled and unable to work. Just send us a short letter by the end of August (see notice in this LogJam as to what information to include).

New Office Staff and Management

If you phone our office you will likely be talking to RISA's new bookkeeper/secretary/receptionist, Sophie Shaitalnik. There has been a complete change of management at RISA. Not only is there a new bookkeeper/secretary but also a new executive director and a new Chairman of the RISA board. Your executive committee has been getting acquainted with them all in recent weeks and look forward to a good working relationship. We have spelled out the service we would like from RISA and will be meeting soon with their new management and staff to ensure mutual understanding of the terms of a new contract with them.

Leased land initiative

Jurgen Moll and Pete Mills met with the ADM of Alberta Sustainable Resource Development, Bruce Mayer to discuss the possibility of allowing sustainable woodlot management on leased crown land by woodlot owners who have a woodlot management plan and have demonstrated good stewardship on their own land. He was interested in the concept and what would be the qualifying criteria. We will keep you informed of further developments on this proposal.

Fall AGM

Our AGM this year will be **October 11/12**. Location tba.

Opportunity for editor

Would anyone like to take over the LogJam? Jurgen says he would be willing to hand it over! Now is your big opportunity!

Trade Fair in Whitecourt

On May 10-11+12 Gary Davis, Herb Cerezke and Jurgen Moll manned a booth in the Whitecourt trade fair, to inform the people attending what a Woodlot is and promote Private Woodlots and the WAA.

Up Coming Events

Board of Directors - Teleconference - **June 30 / 13**
July 28 /13
September 29 / 13
All calls are at 7pm

Board of Directors **meeting** at Whitecourt **August 31, 2013**

Annual General **Meeting** to be held **October 11 & 12** location tba.

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Red Band Needle Blight at ATISC

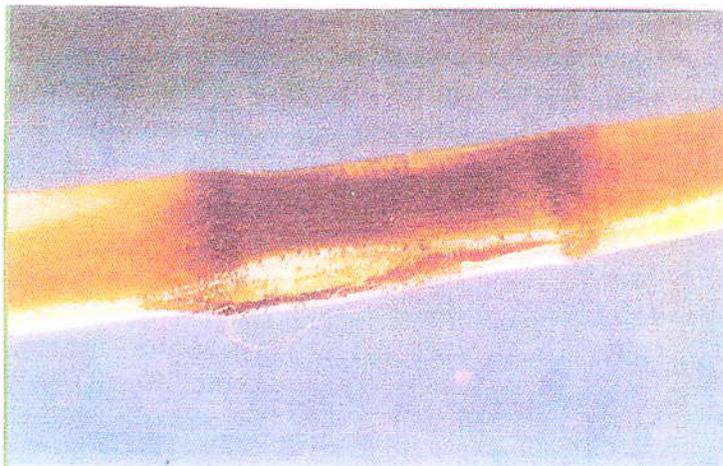
Red Band Needle Blight is a foliar disease (primarily affecting pines) with an extensive distribution world-wide. The causative agents are ascomycete fungi which in North America have been separated into two closely related species – *Dothistroma septosporum*, and *Dothistroma pini*. Like a lot of ascomycetes, the species distinction is somewhat tenuous, therefore, I will refer to these species generically as *Dothistroma* or Red Band Needle Blight for the rest of this article.

Dothistroma can cause severe defoliation and if such defoliation occurs over consecutive years, can be lethal. In the past, it was considered a minor pest, as far as the forestry sector was concerned. The effects of outbreaks vary widely and require the right environmental conditions (i.e. plenty of moisture during the disease's sporulation period) which hasn't been the case significantly enough to elicit much concern. Recently, however, *Dothistroma*'s profile has increased in forestry circles. In British Columbia, Red Band Needle Blight epidemics have grown in size and severity to the extent that it is now a major problem in some areas. Still, in Alberta, it has continued to be considered a minor pest.



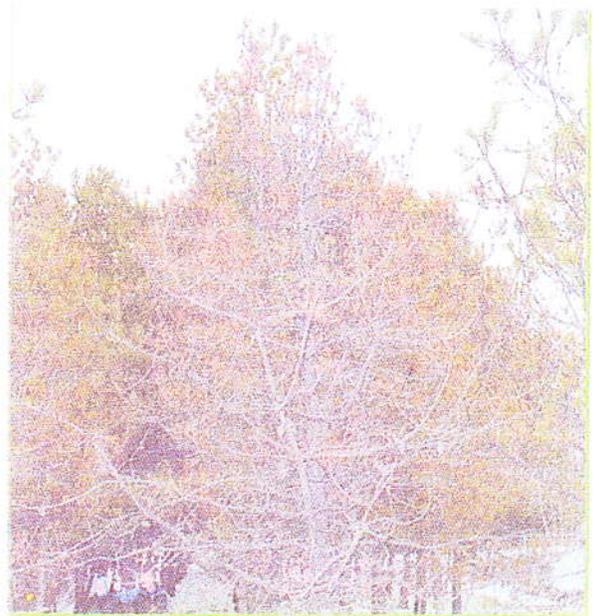
As with any forest health damaging agent, the amount of attention paid to *Dothistroma* can change if it affects certain management objectives. A minor pest in one circumstance can become a major concern in another. Therefore, when this disease was recently diagnosed on pines at the Alberta Tree

Improvement and Seed Centre (ATISC) near Smoky Lake, it did become a cause for concern. ATISC is the Province's primary forest genetics research facility helping to ensure the adaptability, diversity, and genetic integrity of seed available for use on the forested landbase. These resources are crucial to sustainable forest management and the long-term economic and ecological stability of the province. Many of the trees at this site are extremely high value and need to be protected to our utmost ability.



Needle Rupture

On April 10, 2013 ESRD Forest Health, and ATISC staff conducted a preliminary assessment of the Dothistroma infected trees at the Smoky Lake facility. The intent was to see first-hand the extent of the damage and to start planning a control program, if necessary. It quickly became apparent that some of the pines were very badly affected and that the disease was indeed threatening high value stock. Subsequent to that visit, it has been decided that a spray program for this disease will be conducted in the middle of May. The hope is that an application of fungicide will knock down the incidence and severity of Red Band Needle Blight infection enough to allow affected trees to recover and to protect currently uninfected trees.



Affected Tree

Now that Dothistroma is on the forest health radar, it will be important to monitor for it in the future – particularly in tree nursery settings. Will Red Band Needle Blight become a more important forest pest in other pine areas throughout Alberta? Perhaps – time will tell if this will be the case. For now, efforts will be concentrated on controlling the outbreak at ATISC's Smoky Lake site. Stay tuned for an update in our next newsletter.

Tom Hutchison—Athabasca

MY PINEY WOOD

I have a tiny piney wood;
My trees are only fifty,
Yet give me shade and solitude
For they are thick and thrifty.
And every day to me they fling
With largess undenyng,
Fat cones to make my kettle sing
And keep my pan a-frying.

Go buy yourself a piney wood
If you have gold for spending,
Where you can dream in mellow mood
With peace and joy unending;
Where you can cheerfully retreat
Beyond all churchly chiding,
And make yourself a temple sweet
Of rapturous abiding.

Oh Silence has a secret voice
That claims the soul for portal,
And those who hear it may rejoice
Since they are more than mortal.
So sitting in my piney wood
When soft the owl is winging,
As still as Druid stone I brood . . .
For hark! the *stars* are singing.

by - Robert Service -

The NEW WAA Website
www.woodlot.org
Peter Mills

As was mentioned in this months editorial I'm pleased to present our new web site to everyone. I don't know if everyone knows the history. Several years ago we had a very popular site that unfortunately was hacked. To this day we don't know by whom but they basically destroyed our site along with a number of others on the same server. The result of this was that if we wanted a web site it would require a complete rebuild. Unfortunately at the time this was beyond the WAA's resources so we had to go without. Recently we were fortunate enough to get funding for this and other activities from Alberta Environment Sustainable Resource Development and started the process to re-establish the site.

Being that we were basically starting with a blank piece of paper we spoke to numerous people about design and doing the work. Unfortunately we found great difficulty in finding someone or a firm local to Alberta that we were comfortable with. We felt that many of these were either over priced, didn't understand our desires, wanted to make the site far more flashy than we wanted, felt the site should revolve around e-commerce or we just didn't have faith in their ability to deliver. This led us to look farther afield and through that process we talked to or examined the web sites for a number of our colleagues and fellow woodlot owners through the Canadian Federation of Woodlot Owners (CFWO). One

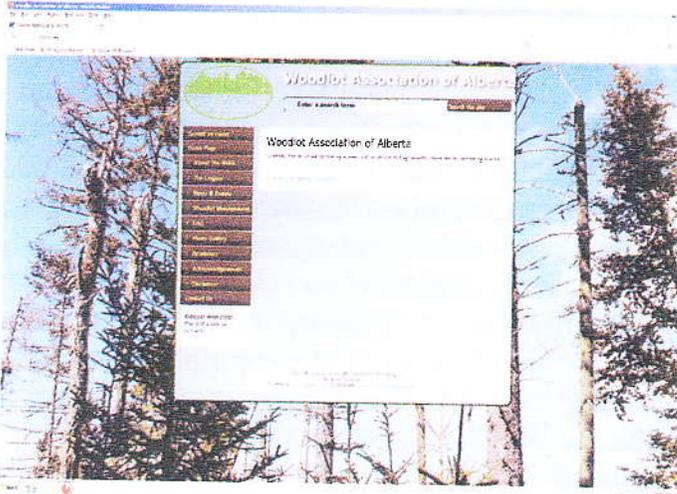


Figure 1 - Home page

site, The Woodlot Information Shop site, put up by the Nova Forest Alliance (a part of the Canadian Model Forest Network, developed and supported by Natural Resources Canada through the Canadian Forest Service) and to the Federation of Nova Scotia Woodlot Owners seemed to fit the bill for what we were thinking. After discussion with these folks they were kindly gave us permission to use of large portions of their existing sites design and content. We also contacted the same web developer¹ (Mr. Jeff Benetti) and service provider that they had used and he proved to be an excellent chap to work with. With the ability to use existing content and a knowledgeable developer we were able to have the site up and running with much more initial content for about 25% of prices we had been quoted earlier. Clearly we owe these folks a huge thanks.

With respect to the site itself, we have tried to follow all of the "standard" conventions. The site has been designed through a series of layers with greater detail as you go deeper. In many places there are words, phrases or bullet type items that will take you to other content. These will be highlighted (typically in

blue but that may change with different browsers). On that point, we have tried the site with numerous different web browsers and it seems to work ok however if you are having problems accessing or displaying any part of it please don't hesitate to let us know. Most of the major tabs will expand when you click on them and can be collapsed by clicking on the small triangle beside the tab name. As an aid in finding things on the site we also have a search facility at the top just below the name. Simply type in a word or words for what you are looking for and click "Search the site". A list of where that word appears will then appear in the window below.

When you initially log in (Figure 1) you will see a central panel which has been designed to announce upcoming events. This is available to any group or individual so if you belong to other conservation or woodlot related organizations that you feel WAA members might have an interest in please don't hesitate to post events. There is a link in the window for submitting that takes you to a small on-line form. Once filled out that form goes to a site administrator for screening and approval. After approval it shows up as a simple one liner that can be clicked on to reveal full details. Similarly the 3rd tab down from the top "News & Events" will also have much of this same information.

Down the left side of the home page you will also see a number of tabs. I think the naming of these is pretty self evident and clicking on any one will take you deeper into that section of the content. You can easily move from one tab area to another by simply clicking on the new tab or go back to the home page by clicking on the WAA logo in the top left. For example, if you click on "About the WAA" it will show links to our "Mission Statement", "History" and "Membership application". Clicking any of these will bring up the appropriate information. If you are anything like me I find that I'm often running around looking for a back issue of this or that magazine. In order to help with this we have scanned in many of the past issues of the "LogJam" so that you can peruse them at leisure.

The 4th tab down "Woodlot Management" is where we really get into the meat of the site. Opening this tab will take you into numerous sub areas of woodlot management. Many of these in turn go several layers deeper and may have active links to other external content or web sites. We have spent a great deal of time trying to make this and other tabs "Albertan" in context however you may still find references to other provincial or national resources. I imagine that some folks would look at all of these sub areas and wonder why we need some of them. Our thoughts are really to try and meet everyones needs. Just as no two management plans are identical and have the same priorities so to with users personal interests. If there is something you are looking for and don't find you're probably not alone so let us know and we can see to adding the required content.

Following the "Woodlot Management" section is something called "FAQ". For those not familiar this is a normal abbreviation for "Frequently Asked Questions". Currently there are a number of general questions listed here and the blue links will take you to answers within the site. We anticipate that over time many

additional questions will come up and when that happens we will screen out the most common and add them into this section. Again if there is something that jumps to immediate mind please let us know.

The Photo Gallery is something that I would really like to see developed over time since everyone knows that "a picture is worth a thousand words". There are a lot of members out there with different interests and hence photos that they have taken over the years. I have identified a number of areas and several of these have sub galleries eg. "Birds" has sub galleries for "Songbirds", "Birds of prey" and "Waterfowl". If you have images that you would like to have posted please just forward them along. With the advent of digital cameras these can often simply be sent as attachments to a email message. If you have older images as prints or slides I can scan these onto the site as well however I will need to have the image for a short while to do so. We have posted a number of images as a start but with all the galleries I have initially set up there is lots of room for everyone's interests. As you will see, anything posted has the author credited and we have the capability to add a short descriptive as well.

The final major section of the site is the "Resources". Some folks would simply call this "links" and I guess that works too. Basically this is a section heavily keyed to external content for any number of areas. As you will see these areas go well beyond simple management of our woodlots but get into commercial areas, government, professional and other organizations and any number of other areas. It's said that these days you can find anything on the net so this is a starting point to do so. If you have sites that you routinely reference for whatever reason chances are that other members would find them of interest as well.

I hope everyone gets a lot of use out of our new web site and look forward to using it to spread the word about the WAA. As I have mentioned several times this is your site so please don't hesitate to let me know what works, what doesn't work, what you like and what you don't like. I'm listing Jeff's contact information below in case other organizations you're involved with are in a similar situation as the WAA was needing a good down to earth developer. I'll look forward to your comments and contributions.

Pete Mills
780-354-8226
pssbd@telus.net

1. Site-Byte Web Design <http://www.site-byte.com/>
37 King Street
Truro, Nova Scotia
B2N 3K7
Phone 902 895-9309 Cell 902 890-0578

UNB Study Changing Forest Carbon Accounting

As concern about climate change increases, the forest's tremendous capacity to sequester carbon has become an important consideration for forest managers and the public.

Recent work by Dr. Chris Hennigar is changing forest carbon accounting which will impact management strategies and silviculture prescriptions and help further reduce carbon dioxide (CO₂) emissions.

Hennigar's computer modeling builds on the Canadian Forest Service's national carbon accounting model (CBM-CFS3) which factored both the carbon stored in the forest and the carbon released by forest ecosystem dead organic matter in projecting carbon yields.

Hennigar's doctoral research showed that adding the carbon retained in wood products to the carbon held in the forest significantly increases net carbon storage. His analysis of the J. D. Irving, Limited Black Brook District projected a net carbon increase of 90,000 tonnes per year until 2062 for that land base. According to United States Environmental Protection Agency calculations, this offsets the emissions of more than 16,000 cars.



Living trees sequester carbon dioxide. Once they die from old age or a natural disturbance such as fire or insect outbreak, some of the carbon stored in the trees is transferred to litter, coarse woody debris and other dead organic matter, all of which release carbon dioxide back into the atmosphere. When a tree is harvested before nature takes its course, current carbon accounting rules consider that an immediate release of carbon dioxide. However, carbon is locked in the resulting consumer products like wood flooring and newsprint, often for many years, depending on the product and its use. Eventually, the product goes to the landfill where it begins to break down and release carbon. Hennigar's simulations factored all stages from living tree to landfill and showed an overall increase in carbon storage of five percent. The modeling also showed that when maximizing total (forest + products) carbon, mean harvest and total carbon storage over 200 years was 173% and 5% higher, respectively, than when maximizing only carbon in the forest. These results indicate that more carbon can be sequestered by harvesting products and re-growing the forest than by setting aside unharvested forest," said Dr. David MacLean, who has been working with Hennigar. "Carbon stored in the forest and in wood products should be integrated in forest management planning".

A focus solely on the economic benefits of carbon tied up in forest biomass could result in management strategy of growing individual trees as long as possible, causing a reduction in harvest levels. Fewer wood products would be produced and people would turn to concrete, steel, plastic and other construction products made from fossil fuels, increasing greenhouse gas emissions. Hennigar's work demonstrates that the "substitution" benefits of using wood in construction are substantial and should be calculated in forest carbon accounting. "We have shown that using renewable wood resources rather than steel and concrete has an important role in influencing forest management strategies to minimize greenhouse gas emissions," he said.

"This analysis may influence the policy around carbon credit accounting nationally and internationally," MacLean added.

As trees age, the rate at which they store carbon slows: a forest's carbon storage capacity is finite. Harvesting trees that are declining in biomass and regenerating stands increases the uptake of carbon. The uptake is repeated each period of new growth, resulting in an accrual in carbon storage.

Pest management strategies also impact carbon sequestration. Measures to reduce tree mortality during insect outbreaks have economic and societal benefits, and protect carbon in living biomass as well as timber supply. If Hennigar's J. D. Irving, Limited Black Brook District forest simulations are extrapolated to all forests in New Brunswick, results suggest that potential forest carbon losses from a severe spruce budworm outbreak without pest management could increase New Brunswick's total mean annual greenhouse gas emissions by up to 40% over the next 20 years.

Nova Scotia and Ontario provincial governments are already using this method of carbon accounting in their management strategies.

Hennigar's work has been published in refereed journals and presented provincially, nationally, and internationally between 2007 and 2010 to such organizations as: FAO, IUFRO, New England Society of American Foresters, Canada's National Carbon Sinks Committee, the Pollution Probe, and others. This research has been supported by funding from NSERC, the ACOA Atlantic Innovation Fund, Sustainable Forest Management Network Center of Excellence, J.D. Irving, Limited, and the Canadian Forest Service.

Minimizing Wildlife Damage

A dozen white-tailed deer gazing in a field or yard at sunrise is a pleasant site for most folks. But probably not to the landowner who has spent money and countless hours establishing trees and shrubs only to have them decimated by hungry wildlife. Wildlife damage during the winter months can be devastating to trees and shrubs. Wildlife feed on alternative food sources such as trees, when their regular food source is unobtainable or scarce. This occurs with deep snow cover or when wildlife populations are high. The most troublesome animals include porcupines, voles, rabbits and deer.

Porcupines

Porcupines feed on a wide variety of trees and shrubs, but prefer pine, spruce, poplar and willow. The porcupine is a large nocturnal rodent, that climbs from tree to tree during feeding. If seen during daylight hours it is often hunched in a ball in a tree. In the summer, porcupines feed on buds, twigs, and leaves, but during the winter they feed on the inner bark of trees. Extensive damage is caused if the porcupine completely girdles the branch or trunk removing the sap wood. The branches above the girdled area will die, resulting in a severely disfigured tree. In Christmas tree plantations or other high value plantings, porcupines can be controlled by trapping and removal from the area. When only a few high value trees are concerned, they can be protected by placing metal barriers (stove pipes) on the trunks of the trees above the snowline; this prevents the porcupines from climbing the trees.



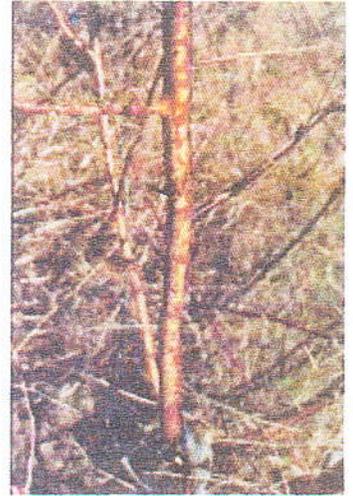
Voles

There are two voles that commonly damage young trees, the prairie vole and meadow vole. Voles are greyish to dark brown in colour, have short-ears and small black eyes. They are approximately 12 cm long, with short tails measuring 6 cm in length. It is not uncommon to have up to 50 voles per acre, as a female can produce 60 young per year. Voles are vegetarians. Their main diet consists of leaves, seeds, roots and bark. In a 24 hour period they can consume their own weight in food. During the winter, when food is scarce, they will gnaw on trees and shrubs. The bark may be removed from the soil surface to the snowline. Vole damage differs from other wildlife, as gnawing is less uniform in direction, with teeth marks made at all angles. If the voles have girdled the trunk completely, growth above the damaged area will die. Older trees with thick bark are rarely damaged. The best protection from vole damage is elimination of weed and grass cover. This deprives the animals of shelter and food and makes the planting a hostile environment for survival and reproduction. Vole damage during the winter can be reduced by placing bait stations in the tree rows in late fall. The most common rodenticide is zinc phosphide. Grain treated with rodenticides is available in most agricultural supply stores. The bait can be placed in commercially available T-feeders or empty one litre cans. A hole, large enough for the vole to enter, must be placed at one end of the can. These types of bait stations prevent farm animals and other wildlife from eating the rodenticide. Plastic tree guards or tin foil placed around the stems of young trees provide excellent protection. Their only disadvantage is high cost.



Rabbits

Rabbits can severely damage young trees in shelterbelts, orchards and nurseries. They kill trees by girdling the trunks, or severely disfigure the trees by removing terminal and side shoots. Rabbit damage is easily differentiated from deer damage; the rabbit removes a branch at a 45 degree angle; whereas, deer have no upper incisors and their bite is ragged. Trees can be protected from rabbit damage in several ways. In an orchard situation, the entire area can be enclosed with one metre high chicken wire fence. It is important that trapped snow does not allow rabbits access over the fence. To protect high value trees, tin foil or commercially available tree guards can be placed around the trunk. Shooting or live trapping of rabbits is an effective means of reducing rabbit populations during the winter. Traps must be baited with products such as apples, carrots, corn on the cob or alfalfa to lure the rabbits to the trap. Repellents are an effective means of reducing rabbit damage. Repellents make the plants distasteful, thus discouraging rabbits from taking a second bite. Several repellents available from commercial nurseries or garden supply centres are Ani-spray, Big Game Repellent, Hinder, Ro-pel and Skoot. Repellents must be applied late in fall when temperatures are above freezing to provide protection throughout the winter.



Deer

Deer can cause extensive damage to trees and shrubs during the winter months. Most deer damage occurs in the weeks immediately following the first killing frost. Browsing of twigs is the most common problem. In extreme cases young seedlings are browsed to ground level and even large trees can be severely disfigured. Tree guards and repellents are the most common methods used to prevent deer damage. Tree guards are the most effective type of protection. The disadvantages of tree guards are that they are expensive and time consuming to install. Burlap, meshed chicken wire or other similar products can be wrapped around and over small trees or seedlings to provide complete protection. For larger trees, a four foot snow fence can be placed around the perimeter of the tree. To provide protection for a row of trees, snow fence can be placed along both sides and at the ends of the tree row. To protect an orchard, an eight foot high fence is required. Odour and taste repellents are often used to reduce deer damage on trees and shrubs. Odour repellents are compounds placed on or around trees. Repellents give off an odour that deer find offensive. Products such as human hair, bars of perfumed soap and mothballs can be placed in nylon bags and hung in trees. Other odour products such as blood meal may be applied on the trees and the ground around the tree. Taste repellents are applied directly to the trees late in the fall when temperatures are above freezing. Deer will take one bite and find it distasteful, and generally seek another food source. Several repellents are available commercially (i.e. Anti-spray, Big Game Repellent, Hinder, Ro-pel and Skoot). Small trees should be treated completely. For large trees, treat only the terminal growth up to six feet. If deer populations are high and food supply is limited, repellents may not be totally effective. Repellents are more effective if an alternate food source such as alfalfa hay or a planted strip of winter wheat is available in an area away from the trees.



Conclusion

While there are a number of ways to minimize wildlife damage to trees, none are foolproof and some can be quite costly. Remember that your goal is to minimize damage to a level you can live with. It is not possible or desirable to completely destroy the wildlife population in your farm or yard. Like humans, animals have food preferences. For example, dogwood and hawthorn are favoured by deer, whereas rabbits particularly enjoy green ash. Very few animals, however, will feed on choke cherry. If animals are a perennial problem in your yard it would be worthwhile to choose species that are not favoured by wildlife.

3D Fencing: Keeping Wildlife Away

"Once you tighten up the wires, it's amazing to see the 3-dimensional effect with the two fences."

What is it & how does it work?

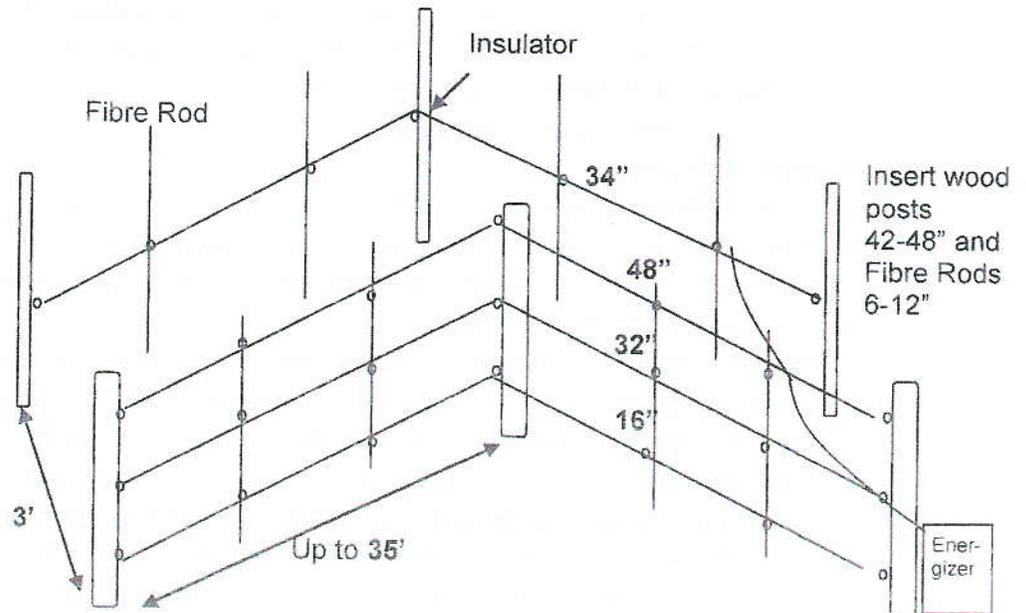
3D fences are used to defer wildlife, mainly elk, deer and moose. It is composed of 2 fence setup that compels wildlife to stop and look before jumping. Since the fence is composed of height, depth and width (hence 3D), wildlife tend to be more careful and will approach with caution.

This is because the eyes of deer, moose and elk are placed on the side of their head, giving them poor depth perception. The key now is to have your fence electrified so when they check it out with their sensitive noses, they receive a powerful shock that leaves them looking for another trail, feeding place or bed.

Quick Facts:

- ⇒ Fences can be permanent or portable.
- ⇒ Have been used in gardens, nurseries, orchards, vineyards, tree farms, etc.
- ⇒ Scent caps can be used to entice wildlife to touch the fence with their sensitive noses.

3D Wildlife Fence Diagram



Riparian Areas: Importance, Protection and Management

What are riparian areas??

Richard Rothwell

Riparian areas occur along the edges of stream and lakes. They are transitional areas between well drained upland soils and water bodies. Riparian areas along streams are usually narrower in width than those on flood plains. The water table (i.e. groundwater) in riparian areas is often close to the ground surface. Vegetation in riparian areas tends to be different from adjacent upland slopes and can be any combination of trees, shrubs and grasses depending upon local conditions. Plant species in riparian areas are often described as *phreatophytes* which mean they obtain water directly from groundwater or the partially saturated zone above it (i.e. capillary fringe). Examples of different kinds of riparian ecosystems in Alberta can include: alder lined mountain streams, cattail rimmed wetlands and slough, spruce and shrubs along boreal creeks, cottonwood forests along prairie rivers, parkland potholes with aspen and sedge and willow along foothill creeks.

Why are Riparian Areas important?

Riparian areas are relatively small in areal extent but they are an extremely important part of most ecosystems. Riparian areas adjacent to water courses and water source areas perform a number of ecological functions and services:

- The movement and storage of surface and groundwater in riparian areas result in productive and diverse plant communities,
- Riparian areas help to regulate stream flows (storage and release of surface and groundwater),
- Periodic flooding and sediment deposition in riparian areas provide nutrient-rich organic matter and dissolved nutrients necessary for plant growth,
- Riparian vegetation reduces sheet, rill erosion, gully erosion and traps sediments before they reach stream channels,
- Riparian vegetation also can trap nutrients and microscopic pathogens in soil water. Some nutrients, especially nitrogen, phosphorus, calcium, magnesium and potassium are taken up by shallow-rooted vegetation. Dissolved nutrients in groundwater and those leached from the soil may be taken up by deeper rooted vegetation,
- Shade from riparian vegetation moderates stream temperature,
- Provides bank stability and debris for creating aquatic habitats,
- Riparian areas are a source of food and nutrients for aquatic organisms,
- Provide habitats for a high diversity of wildlife species and other terrestrial biota,
- Are corridors that link different landscape and habitat features,

Protection and Management

The functions and ecosystems services of riparian areas can be altered by natural and human caused disturbances. Flooding and associated erosion and deposition are common disturbances that can reshape riparian areas. The results of extreme flooding often appear to be devastating,

but in most cases, recovery is rapid. However, disturbances from human activities can have long term adverse effects on riparian areas. Some of the most adverse include the building of dams and channelization (straightening) of stream channels. Disturbances like these that affect the movement and storage of water will result in permanent changes to riparian areas. The most common human disturbances to riparian areas result from clearing vegetation and converting to other land uses such as cropland and urban land.

In forest management the need to protect riparian areas and their ecosystem services is well recognized. In most jurisdictions in North America forest management prescriptions to protect riparian areas consist of no-cut/disturbance zones around water bodies with riparian areas acting as a buffer to prevent disturbance and the transport of sediment and logging debris into water bodies.

In Alberta standards and guidelines for operating (forest harvesting) on Crown Lands beside watercourses are defined in the "2008 - Alberta Timber Harvesting Planning and Operating Ground Rules Framework for Renewal". These guidelines and standards are categorized by watercourse classifications that include: watercourse crossings, large and small permanent streams, intermittent and ephemeral streams and lakes. The extent of "protection areas" or buffers varies with watercourse classifications and the kind of disturbance. For example the construction of roads and landings, decking of timber and creation of bared areas is not permitted within 100 m of the high water mark for large permanent streams compared to 30 m for small permanent streams. The protection area for lakes with recreational value is 200 m compared to 100 m for lake with little recreational potential. Guidelines for the protection of large and small streams do not permit timber removal within 60 and 30 m respectively of their high water marks. Exceptions to these guidelines require approval and must be included in the annual operating (i.e. harvest) plan.

Some level of forest harvesting is allowed in riparian areas by most jurisdictions in North America. The types of harvesting used include: single tree selection, group selection and zoned harvest areas. Restrictions on harvesting to maintain/protect riparian values include the following: retention of at least half of the cover, volume or basal area, controls on the use of machinery (i.e. surface disturbance, soil exposure), retention of understory and advanced regeneration, prevention of shoreline and stream bank disturbance and erosion, spatially dispersed harvesting, and prevention of "high grading" of large or high value trees (Lee *et. al* 2004).

In conclusion, some people might ask, "why harvest in riparian areas if protection of riparian values is the primary goal?" For the individual land owner and forest companies harvesting is an opportunity for short-term economic benefit and from a landscape (ecological) perspective harvesting allows for the introduction and maintenance of tree-replacing disturbances in riparian areas. It is suggested by some researchers that partial harvesting in riparian is a management analogue for single tree or small group replacement. In such a model, tree removal would follow a gradient of no harvesting at waters edge to single tree and group selection harvesting as one moves upslope away from the stream channel.

Suggested reading:

"2008 - Alberta Timber Harvesting Planning and Operating Ground Rules Framework for http://srd.alberta.ca/LandsForests/ForestManagement/ForestManagementPlanning/documents/Annex_4_draft_Jan_15_08Final.pdf

Lee P., Smyth C. Boutin S. 2004. Quantitative review of riparian buffer width guidelines from Canada and the United States. *Journal of Environmental Management* 70 (2004) 165- 180.

Palik J.H., Sasada J.C. Hedman C. W. Ecological principles for riparian silviculture: In: Verry C. W. Hornbeck J.W., Dolloff C. A. (Eds.) *Riparian Management in Forests for the Continental Eastern United States*. Lewis Publishers, Boca Raton. FL. Pp. 233-234)

Total fungus genome could fight tree-killer

Scientists have mapped the genome of the fungus that causes Dutch Elm disease, an infection that threatens the survival of trees around the world. The findings could help scientists figure out how to prevent the fungus, *Ophiostoma ulmi*, from destroying elm trees in the future.

Essentially, Dutch Elm disease is caused by a fungus that prevents the normal distribution of nutrients in the tree by blocking the flow of the sap, the tree wilts and eventually dies.

Relatively little is known about the fungus that causes Dutch Elm disease, and it's a very distant relative of the fungi that are more often studied by researchers, like bread mold or beer yeast.

They hope that the availability of the genome will encourage and speed-up research on this fungus -- it is only a matter of time before most of the elm trees are gone.

Dutch Elm disease is believed to have originated in the Himalayas, traveling to Europe from the Dutch East Indies in the late 1800s. It emerged in Holland shortly after the First World War, which earned it the name Dutch Elm disease.

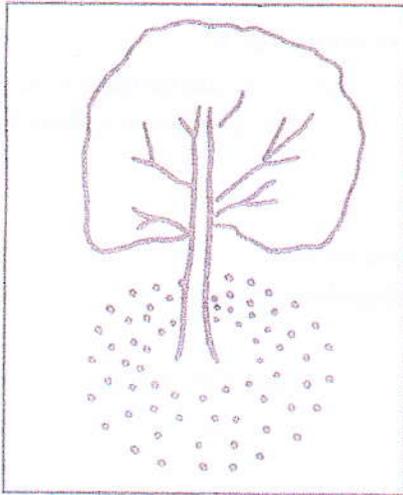
It is the most destructive elm tree disease in North America, and typically kills most trees within two years of infection. Dutch Elm disease is a problem in many parts of the world, particularly Scotland, Spain, Italy, Western Canada, and New Zealand.

FERTILIZING TREES

Fertilizing your trees to promote better and faster growth may seem like the logical thing to do, however, this is not always the case. Ornamental trees may require fertilizing because many grow under poor conditions having to tolerate extensive pruning, large areas of pavement and concrete, and sod cover which can use up most of the available nutrients and moisture. On the other hand, shelterbelts usually grow under better soil conditions.

There is no general agreement on the best formulation of fertilizer for trees, however, it is agreed that the fertilizer should contain the three major elements, N, P and K. Nitrogen will move downward in the soil, however, phosphorous and potassium move very little in the soil.

Trees have a deep and extensive root system as compared to annual plants. The location of feeding roots varies with species and soil type but generally they are present in a band around the tree, extending from the dripline (the farthest spread of branches) inwards two-thirds of the way. Occasionally the roots will extend 1½ to 3 times beyond the dripline. Fertilizer must be placed near the feeding roots so that it is available to the tree. The recommended method of doing this is shown below.



The fertilizer is put into many holes placed around the tree and then the holes are filled in with peat moss, shredded manure, or topsoil. The holes should be 1½ to 2 feet deep, about 2 feet apart and slanted toward the tree. For the homeowner, a crowbar is the most readily available tool for making these holes. The best time of the year to do this is in the early spring. Summer applications are not recommended because soft, succulent tissue is produced which does not have enough time to harden off before fall.

This method of fertilizing trees may be useful for high value ornamental or shade trees, however, this is not a feasible method of application for shelterbelts. There are several other reasons why fertilization is not recommended for shelterbelts. First of all, shelterbelts grow in a more favourable environment than city trees.

Secondly, soil tests outlining nutrient deficiencies for crops do not necessarily apply to trees growing in the same area. This is because tree roots go much deeper, thus having more nutrients available to them. Also, trees do not necessarily require the same amount of nutrients as crops.

Thirdly, shallow fertilization for a few years as is done with crops, will probably do more harm than good over the long run. The fertilizer does not move much in the soil so root growth near the soil surface is promoted. This leads to a shelterbelt with a shallow root system which is more likely to suffer from drought during dry spells. Trees such as poplar and Siberian elm normally have a shallow root system and surface fertilizing can aggravate this.

In conclusion, fertilizing ornamental trees can be done but fertilizing shelterbelt is not a recommended practise.

Trees Linked With Human Health, Study Suggests

"I am the Lorax. I speak for the trees. I speak for the trees for the trees have no tongues," Dr. Seuss's the Lorax said. And perhaps we should *all* be speaking for the trees, as a new study links the [presence of trees with human health](#).

Specifically, researchers found that people experienced more deaths from heart disease and respiratory disease when they lived in areas where trees had disappeared.

"There's a natural tendency to see our findings and conclude that, surely, the higher mortality rates are because of some confounding variable, like income or education, and not [the loss of trees](#)," study researcher Geoffrey Donovan, who is a research forester at the Pacific Northwest Research Station of the U.S. Forest Service, said in a statement. "But we saw the same pattern repeated over and over in counties with very different demographic makeups."

The study, which is published in [the American Journal of Preventive Medicine](#), involved data from 1,296 counties spread over 15 states. Researchers examined how many deaths from heart and respiratory disease occurred over 18 years.

The researchers found an association between areas that had been affected by the emerald ash borer beetle -- which kills trees, leaving areas treeless -- and 15,000 more deaths from heart disease and 6,000 more deaths from respiratory disease.

"This finding adds to the growing evidence that the natural environment provides major public health benefits," researchers wrote in the study.

Past studies on the health effects of nature lean more toward its effects on mental health. For example, 2010 research published in the Journal of Environmental Psychology shows that it [helps people to feel more alive](#).

Canadians want resources national, not provincial. Will leaders listen?

Canada's history, geography and geology have ensured that the country's natural resources – minerals, fisheries, forests, oil and gas – will always be central to its economic and political power. As a decentralized confederation, it is the provinces rather than the national government that have primary jurisdiction over these resources to exploit and manage more or less as they see fit.

The booming oil and gas sector in western Canada has transformed this region into the country's economic powerhouse, fuelling economic growth and underwriting provincial budgets. This has resulted in a growing imbalance with central and eastern Canada, where the economy has lagged and provincial governments are struggling with growing deficits. All indicators now point to the economic and political centre of the country having shifted westward, due almost entirely to the wealth flowing from under the ground.

But do Canadians as a whole buy into the notion that the economic benefits of natural resource wealth should flow solely to the provinces in which these resources are found?

Most in fact do not, based on a recent Focus Canada national public opinion survey conducted by the non-profit Environics Institute for Survey Research. The survey (conducted by telephone in November-December 2012 with a representative sample of 1,500 Canadians) reveals that a majority (67 per cent) of Canadians believe the benefits of natural-resource wealth (in the form of royalties) should be shared nationally and benefit all Canadians. Fewer than three in ten (28 per cent) take the opposite view and maintain these resources belong to the province where they are found and that this is where the royalties should also be spent or invested.

As one might expect, views on this question are shaped in part by the resource base where people live, but more notably the national perspective is also the majority opinion in every province but one. The view of natural resources as a "national treasure" is most widespread in Ontario (81 per cent) and Manitoba (72 per cent), but there are also decisive majorities in British Columbia (67 per cent), Atlantic Canada (62 per cent), Quebec (58 per cent) and Saskatchewan (52 per cent). Only in Alberta did this reflect a minority opinion (where 41 per cent favour "national treasure," versus 53 per cent who say the resources belong solely to the province).

Also revealing is majority agreement across the political spectrum (as measured by support for federal political parties) that natural resources are a national wealth to be shared (with the notable exception of Bloc Québécois supporters who favour provincial control by a 53 per cent to 44 per cent margin).

This survey tells us that the Canadian public may not be as provincial in viewpoint as one might expect given what appears in the media and comes out of the mouths of their elected leaders. Despite little talk these days about a national story, most Canadians (if not all) still maintain a national perspective that transcends their regional identity and interests.

This is confirmed by other findings from the survey showing that most continue to feel strong pride in being Canadian, identify more with the country than their province, and believe they share values in common with others across the country. As well, the survey also shows the public is now less sensitive than in past decades about other regions being unfairly favoured by the federal government.

And finally, the data also suggest Canadians do not view the question of natural-resource royalties as a winner-take-all contest, but something that in principle can benefit both their own province and others. It should be expected that provincial politicians will always focus on what's best for their constituents, but we can hope they too will keep a broader national purpose in mind.

Pellet stoves a newer option for burning biomass

Pellet stoves are a relatively new wood heating appliance, similar to wood stoves in concept, but they have automated operation and burn biomass.

Pellets are manufactured from compacted sawdust, wood chips, agriculture crop waste, wastepaper and other materials such as nutshells, corn kernels, sunflowers, and soybeans. They are about one inch long and look like rabbit food. The pressure and heat created during production binds them together without the need for glue.

How it works, the stoves are designed to heat a space directly. The stove consists of a combustion chamber, ashtray, and a flue to vent exhaust gases. In a pellet stove, the flue can be direct-vented through a wall, meaning that no chimney is required. Pellets are stored in a hopper near the stove, large enough to last more than for one days use.

Pellet stoves use electricity to run three motorized systems.

- * A screw auger feeds pellets into the fire at a controlled rate.
- * An exhaust fan vents exhaust gasses and draws in combustion air.
- * A circulating fan forces air through the heat exchanger and into the room.

The motorized system are controlled by a control system which allows the stove to operate automatically.

As with other wood burning devices, pellet stoves require frequent maintenance, yet less than wood burning stoves. The stove should be inspected regularly, the hopper kept full and the ashtray emptied on a weekly bases.

WOODLOT TRAIL MAINTENANCE UTILIZING A MECHANIZED MULCHER

Peter & Susan Mills

Recently we had decided that we were behind in the maintenance for our woodlot. Between health issues (a

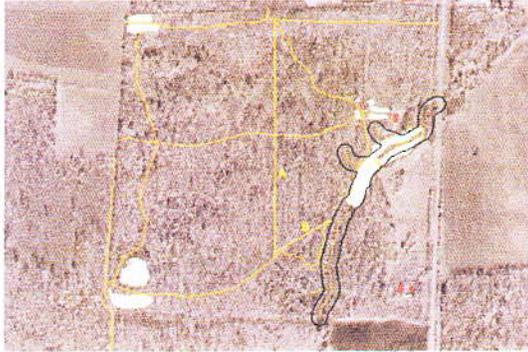


Figure 1- Mills woodlot showing existing and new trails (A+B)

broken wrist and arthritis), a great deal of understory regrowth and some very recent severe wind storms the trails on our Saskatoon Mountain property had become difficult to utilize. While to many this may not seem to be that big a deal these trails are utilized by ourselves and our guests and represent a critical component of our woodlot management plan.

I should point out, to all of those that have not had the opportunity to visit us on this property, the forest cover is fully mature and largely comprised of Balsam Poplar, some Trembling Aspen and several drainage channels having significantly sized Willow “balls”. Some Poplar blown down was in the 6-8” (150-200mm) diameter range with an estimate 25% of it was 18-24” (450-600mm) diameter so no easy job to move even when sawn into short blocks. The existing +/- 3 km of trails (Figure 1) were originally put in with a D2 caterpillar. However, it’s small size meant, I was forced to go around trees of larger size with the result that many of the trails were very narrow in places with frequent sharp corners. While generally ok for walking it limited other types of use including small tractors or even quads in places.



Figure 2 - Mulcher upon delivery

Initially my thinking was “grab the chainsaw and have at it” however the practicality of that illusion quickly asserted itself when my arthritic wrists and hands protested after the first long session. Realizing that the strong arm solution wasn’t going to work we decided to look into alternative ideas for the cleanup. Initially I had thought about hiring a slashing crew. A year

ago I had hired one person as a helper for a couple of days while my wrist was mending, however, looking back at how much we accomplished at that time for the costs incurred I realized that this year it would need several men for several days just to put things back the way they were. The labour costs and liability issues around chain saw use caused us to dismiss this option. That in turn led us to an idea that we had thought about on several occasions - the use of a "mulcher" (Figure 2).

For those of you who may not be familiar with this type of equipment, they are a tracked unit and are used extensively in the oilpatch for cutting seismic lines through the bush. Picture a small caterpillar tractor with a very large and aggressive rototiller mounted on the front. Being a tracked carriage means the weight is spread over a larger area which results in very low ground pressure (+/- 2.5 psi). The mulching teeth are carbide and designed to eat anything short of the largest rocks. As the unit crawls through the bush the mulcher head can be lifted or dropped down and in that way leads the way and reduces anything in its path to various sizes of chips depending on the ground speed and the number of passes. If a large tree is in the path it simply eats out the base or side of the tree until it falls then either chips it up in its entirety or pushes the bulk of it out of the way (Figure 3).

Having concluded that this was an option which we wanted to investigate further the next step was finding out who had suitable units and at what price. In our corner of NW Alberta with all of the oil patch activity they are fairly common and because of spring breakup many units were available. That said, it also became apparent that many of the units were much too big for our purposes and more so the companies expected to bill them out at



Figure 3 - Mulcher working its way through a large log

several contractors that we really needed larger units we still had concerns

"oilfield rates" - entirely beyond our pocketbook! We really couldn't see our way to a 400+ horsepower unit costing a minimum of \$300/hr so we kept looking and eventually came up with a local supplier¹ who not only had much smaller units (80 HP) but was willing to give us a good price so that his operator got extra hours in during a time when he would normally be laid off - a win-win for everyone. Having been told by

that an 80 HP machine could do the job. To address this, our local contractor told us that he would be happy to bring the unit out for a demo. He indicated that if we didn't like the job it did he would simply take it home no questions asked. We also discovered an additional benefit that because he was local he didn't charge any transport delivery to the job site and due to the lighter weight of the unit was able to bring it out while road bans were in effect that prevented movement of the larger units.



Figure 4 - Typical trail before mulching

The evening of the demonstration went very well and we were much impressed with the way the trails were opened up and cleaned up. In Figure 4 you can see a typical amount of blowdown and that the trail lacks definition due to regrowth. Figure 5 has been taken from very nearly the same spot a week later and clearly shows the blowdown removed and the improved definition of the trail.



Figure 5 - Trail shown above in figure 4 after mulching

Seeing the work that this machine was capable of on the



Figure 6 - Mulcher cutting new trail through native bush

existing trails, we were very pleased and started thinking about the possibility of utilizing it, while it was on the property, for some new trails we had been considering. On several occasions we had wanted to access central parts of the woodlot but this had proven difficult.

We decided to cut a new trail north-south across the quarter effectively quartering the area. We did this using an avoidance policy where we marked

out a compass route with flag tape and the mulcher then followed the general direction. This route is shown as "A" in Figure 1 where the route appears as a perfectly straight line however, in reality, because of the avoidance policy it makes numerous gentle sweeps while still following the line. The result is that visibility along the trail is limited to a maximum of about 100m. When examining the rest of the trails it became apparent that another section had excessive corners and was too close to the creek riparian edge. We decided

to cut a new section ("B" in Figure 1) that bypassed that section not only effectively increasing the creek buffer but also bypassing a heavy willow area where drainage was occurring into the creek. One of these new trails being cut can be seen in Figure 6.

One concern was that being spring there were some areas on the woodlot where surface drainage occurs. Some of these were willow runs while others dispersed wet areas. After discussions with the operator regarding these concerns and in the end, given the low ground pressure of the machine, it was decided to test one. We found that the machine could go through these areas with little problem or disturbance as long as it



Figure 7 - New trail showing standing water to right

didn't attempt to turn. In our test area there was some material that needed to be removed and as soon as the operator tried to turn into the work the tracks dug into the mud causing rutting so we ended up leaving one tree for hand work. Up to that point there was virtually no impact. We later had another wet area which ran through an area of moderate sized willows and decided to try it again ensuring no turns. This area actually had patches of standing water 4-6" (100-150 mm) deep, however on a straight run the machine had virtually no impact. In fact, as can be seen in Figures 6&7, as the unit mulched the willows it created a bed of mulch underneath the cutter head that it ran along so that the trail was actually drier than the surrounding area on the right of the trail.

In summary, while probably not the universal solution for all woodlot owners, we found the use of a mulcher of great benefit to us. Conditions that made this possible were:

- 1) the extensive nature of the work to be done
- 2) the issue of my arthritis that precluded doing it ourselves
- 3) the time factor both with respect to the machine availability and the amount of work done per day
- 4) the ability to find a smaller unit at a reasonable price
- 5) the ability to co-ordinate with my wife's work schedule

1. Vidar Mulching, 904 2 Ave, Beaverlodge, AB T0H 0C0 780-354-8002,
Attn: Mr Rick Calvert

Having Fun and Making Money in the Woodlot

When oil went below \$10 a barrel in 1986, my job a petroleum geologist in Calgary, the 16th floor corner office, and the personal secretary headed south faster than you can say "Here's your pink slip."

Although the severance package of \$25,000 doesn't seem like much now, it was enough to put a down payment on a half section of land near the hamlet of Colinton, Alberta (10km south of Athabasca). For \$86,000 the parcel included an old house and corrals, an east to west flowing creek, a 1.5 acre dugout and 156 acres of "mixed" forest heavy on the poplar with a smattering of paper birch, white spruce and tamarack.

What I didn't know then, that I know now, is that forested agricultural land has been one of the best investments and the absolutely the best retirement strategy in Canada. The value of my forested land has increased in value on average ten fold with some of it doubling in the last 3 years plus as a bona fide prairie farmer, I am also entitled to a one time capital gains exemption of \$750,000.

The best part is that agricultural land is taxed on its productive value, not its assessed value. Since most forested land is still forested because it is poor for growing crops, the property taxes are next to zero. In the following example of one eighty acre piece of land of mine consisting of mature pine covered sandhills, the property taxes are less than \$16 per year. It cost more to park in downtown Edmonton for a day than it does to own this pine paradise.

But my woodlot provides me with more than just a sound investment and premium recreation, it is also an integral part of my farming operation providing approximately \$20,000 in cash flow annually from selling forest products such as lumber, firewood and woodchips and many thousands more in intangible benefits as a shelter for cattle, crops and houses.

In 1992 I started growing trees to sell commercially on twenty five acres of land at the junction of highways 663 and 63 (the main road from Edmonton to Fort McMurray) Operating as "Mr. V's The Place for Trees". Mr. V's has flourished from a "Mom and Pop" business making \$30,000 per year working out of garage into a diversified corporation, including a gift shop, greenhouse and tree nursery that employs eight people with gross revenues of well over \$30,000 per month.

Many of the trees grown in the nursery are actually dug as seedlings out of the forested area on the adjacent farm. The seedling are planted in rows, have woodchips placed around the base and irrigated with a drip system. Usually the trees are over six feet tall when they are dug and sell for anywhere between \$72 to \$500 depending on height and species. When the trees are planted on the clients property, we put a six inch layer of woodchips (a by product of the sawing operation) in an 18 inch radius around the base

newly planted tree. The woodchip mulch keeps the roots cool and moist in the summer and warm and moist in the winter. The six inch mulch layer reduces the amount of water required by 50%. The woodchip mulch comes from chipping the slabs remaining after the sawing operation and are actually more valuable on a per cubic meter basis than the lumber is.

The sawing operation runs for one or two weeks in the spring using poplar as a feedstock. The sawmill is a PTO powered headsaw that is capable of producing up to 20,000 board feet per day depending on the length and thickness of the lumber being cut. The boards are dry piled with one inch thick stickers placed two feet apart between the layers. The stacks of lumber are stored under a pole barn (also built from woodlot wood) for one year. The dried wood is frequently sold, but more often it is used for the construction of farm buildings or painted with used motor oil as a preservative and used as outdoor wood for corrals, gates and alleyways.

The logs for the sawmill are cut in late October or early November after the migrating birds have flown south usually after the first permanent snowfall. The trees are selectively harvested and are hand fallen in a manner that disturbs as few of the remaining juvenile trees as possible. This low disturbance allows the poplar forest to be harvested every twenty years instead of the usual fifty to sixty years when large mechanical equipment is being used. The logs are skidded to the log yard using a farm tractor equipped with a PTO driven skidding winch.

Once at the log yard, the logs are graded and bucked into various lengths depending on the size and shape of the tree. Since poplar is often twisted or has centre rot, usually only half the trees harvested are suitable for sawing. The rest must be chipped or cut into firewood. Poplar firewood is relatively poor for heating because of its low caloric value and its high ash content, but is great for outdoor campfires because it does not "pop"

Once the wood is deemed substandard for sawing, the trees are cut into 10 foot lengths and fed into a firewood processing unit. The pieces are cut into 16 inch lengths with no one piece greater than 6 inches in diameter. The processed firewood is then stored out of the rain in a pole barn for a minimum of one year to insure proper drying and curing and then is either sold in buck (\$2.00 per cubic foot, \$256 per cord) or is bundled into mesh bags and sold either to campgrounds or other retailers at \$4.00 per 1.5 cubic foot bag (\$2.67 per cubic foot or \$340.00 per cord)

The farm also uses a symbiotic relationship between trees and cattle. The trees block the wind and keep the cattle warmer in the winter, and provide shade to keep the cattle cooler in the summer. The cattle intensively graze the forest pastures for short periods of time in the late summer and fall as a "lawn mower" for the tall grass growing in between the trees. When "fire season" arrives in the following May and June, the dried grass is so short that ground fires either fizzle out or are easily controlled from becoming a crown fire

Ever since Hugh Hefner figured out that "people prefer to read pictures than anything else" it is better that I show you what is happening in my forest than telling you. For more information on all of the stuff included in this article, I encourage you to check out my website at www.brunowiskel.com

Much to Close for Comfort

Jurgen Moll

On Saturday May 18 I had gone to town, and on my way home I noticed a good sized smoke, in the general direction of where I live. When I first seen it, it was light grey which ment that it was burning in light fuel, ie. brush and grass. But as I kept an eye on it the smoke turned to black this told me that the fire was now burning conifers. This moved the fire much closer to where I live as my Woodlot is in an area that is predominantly conifers.



As I got closer to my home which is located on my Woodlot it looked as if the fire could be on my land. I must tell you that when I turned into my drive - way, my mouth was really dry, even though I was sweating. Guess that is what fear feels like, for I visualized my groomed Woodlot being consumed by the fire.

When home I took the quad to see where the fire was and if in my Woodlot. What I found was the fire burning about 20 feet from my land, on the neighbours property.

What saved my Woodlot was that it started on the neighbours land west of my land, there was an east wind, and the quick aggressive action that the Forestry (ESRD) took to stop the spread of the fire and save the land owners home.

I hope that this serves as a reminder to all Woodlot owners, to be very conscious of the potential damage that a wild fire can do to your Woodlot. Therefore make a plan to reduce the chance of loosing your Woodlot to a wildfire. Also to inform your neighbours of the danger that uncontrolled fires will present. For a life time of work can be destroyed in a matter of hours. *(The fire burnt 49ha or 110ac)*