HANSARD

NOVA SCOTIA HOUSE OF ASSEMBLY

COMMITTEE

ON

RESOURCES

Thursday, June 18, 2015

LEGISLATIVE COMMITTEES OFFICE

Nova Scotia Silviculture Contractors' Association
&
Agenda Setting

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Resources Committee

Mr. Gordon Wilson (Chairman)
Mr. Keith Irving (Vice-Chairman)
Mr. Lloyd Hines
Mr. Bill Horne
Ms. Margaret Miller
Hon. Pat Dunn
Mr. John Lohr
Hon. Sterling Belliveau
Ms. Lenore Zann

[Mr. Brendan Maguire replaced Mr. Lloyd Hines]
[Mr. Eddie Orrell replaced Hon. Pat Dunn]
[Hon. Alfie MacLeod replaced Mr. John Lohr]

In Attendance:

Ms. Kim Langille
Legislative Committee Clerk

Mr. Gordon Hebb
Chief Legislative Counsel

WITNESSES

Nova Scotia Silviculture Contractors' Association

Mr. David McMillan, President

House of Assembly
Nova Scotia

HALIFAX, THURSDAY, JUNE 18, 2015

STANDING COMMITTEE ON RESOURCES

9:00 A.M.

CHAIRMAN
Mr. Gordon Wilson

MR. CHAIRMAN: I'd like to call the meeting to order. Sunshine brings out chatty groups, doesn't it? It's always nice.

I thank everybody for coming. My name is Gordon Wilson, I'm the Chairman of the Resources Committee. Today the committee will be receiving a presentation from the Nova Scotia Silviculture Contractors' Association.

At this point in time I'd like to ask the committee members to introduce themselves.

[The committee members introduced themselves.]

MR. CHAIRMAN: Thank you all very much. I'd like to remind everybody in attendance that cellphones and all those things should be on vibrate. I'd prefer that they be turned off, personally. I'd like to remind members also to please wait to speak until after the chairman has recognized them, for the sake of Hansard, but usually it goes pretty good in here.

We have the agenda today and I see there is some business to deal with in committee business, with correspondence. This is also an agenda-setting meeting today so we will be dealing with that, so probably looking at wrapping up our questioning around 10:35 a.m. with the witness and that will allow us some time to deal with committee business.

At this time I'd like to welcome the witness and ask him to introduce himself to the committee and begin his presentation.

MR. DAVID MCMILLAN: Good morning. My name is David McMillan and I am President of the Nova Scotia Silviculture Contractors' Association. I am a forest technician by education and a forest management person by trade. I also have a bit of pulp and paper technology experience in my background as well.

I reside in West Tatamagouche, Nova Scotia, and I'm here today to talk to you about silviculture. I have to tell you that I was a little bit puzzled over what kind of presentation I should give. Mr. Wilson is a technician so that's someone who's very knowledgeable about forestry, but I'm guessing there are other folks who probably aren't nearly as so.

After giving it a lot of thought, I thought that a short video explaining all the things we do in the world of silviculture - because silviculture itself is simply a title. The textbook meaning of it is the art and science of managing forests, so that encompasses a whole lot of things.

I hired an up-and-coming media company to produce the video. I'll give full disclosure, my son Ben is one of the partners in that new company. This video you're going to see in a second or two was completed last night, I believe around midnight, so none of us have seen it. So it will either be a success, or something less.

This video basically talks about the types of activities you will see occur in Nova Scotia. Not every place or province in Canada does all the various silviculture activities that we do in Nova Scotia. Hopefully this will give all of you kind of a bit of a sense of the different treatments we actually do.

[A video presentation was played.]

MR. MCMILLAN: That was pretty good. I guess just to summarize what we saw there, if you're in the business of silviculture, your job is to basically come in after the loggers have clear-cut or nature has done some sort of event that has created basically a forest that's now no longer standing. Planting, stocking assessment to see if there are enough trees growing on a per acre basis, pre-commercial thinning, which is where you basically go in at about 20 years of age, because Mother Nature in Nova Scotia does a really good job regenerating forests. I think the statistic is that 97 per cent of Nova Scotia's forests will regenerate naturally, you do not need to plant. However, we do something called fill planting which is that although Mother Nature does do a good job of planting,

may not necessarily cover the whole area, so fill planting is basically where we go in and we plant the holes that are left vacant.

At about 40 years of age - commercial thinning is where we basically go in and thin out the trees. The reason we did the pre-commercial thinning at 20 years of age and we do a commercial thinning at 40 is that trees respond, basically, to sunlight; if they get lots of sunlight, they will grow very quickly in terms of diameter. It doesn't really affect their height. If, however, you thin at 20 and then forget about it, at about 40 years of age the trees have grown to a size where they're again struggling for sunlight, so that is the whole point of commercial thinnings every 20 years - as the trees crowd each other and the crowns start to die because of the lack of sunlight at the lower levels, the tree growth will slow down.

I often make the comment that people in the silviculture business, all we do is what Mother Nature does herself, we just mess with the time frames; instead of taking 150 to 200 years to grow trees to maturity naturally, we can do it in about 60. It's all based on controlling the number of stems per acre so that the trees that are there get the maximum amount of nutrients, moisture and light. That's what it's all about.

Towards the end of the video they talk about doing a heavy thinning. If you clear-cut, you will typically get what's called pioneering species of trees. Those are species that like sunlight and they typically are trees that you would find after a forest fire, insect infestation or a clear-cut. All those things would be considered a catastrophic change to the forest.

The types of trees we're talking about are aspens or poplars, balsam fir. These are trees that seed in really well but they don't typically have very long lifespans. So if you get into the cycle of clear-cutting and then harvesting - clear-cutting, harvesting - what you'll end up with basically is a forest that consists of balsam fir and poplar. Those trees typically start dying out at age 40 and 50. That's the type of forest activity you're going to see if you are dealing with poplars and aspens.

In Nova Scotia and in the Maritimes and New England, we have what's known as the Acadian forest region. We're basically the zone where the Appalachian forests from the southern U.S. and the arboreal forests from the north come down and hit each other, so we have a lot of tree species as a result of that.

The tree species that foresters and silviculturalists really like to deal with are those tree species that live a long time. Oftentimes those are the same tree species that are the most valuable. Red spruce, which is Nova Scotia's provincial tree, is probably the most valuable softwood that we can grow in terms of its value. It's a tree that will live to be 200, 250 years of age, which means it can get really big if you're managing for that.

The beauty of a tree that lives to be 200 is that you can thin that forest and thin it again and thin it again. In fact, you can thin it over four or five generations of humankind because of the longevity.

If you're growing balsam fir, it lives to be 40 or 50 years of age. You might thin it once, but by the time you're ready for a second thinning, it's actually ready to die. So most of the commercial thinning-type silviculture that we're looking at here originally came from Scandinavia and Germany. Those are the folks who sort of invented the science, if you will, of the type of silviculture we're talking about here. The big difference with Nova Scotia compared to, say, Scandinavia is we have a whole lot more tree species and we have tree species that live a whole lot longer.

About five, six, seven years ago, the provincial government of the time expressed some really strong feelings about all of the clear-cutting that they saw going on in the province. I think one of the comments that I heard was: I'm sick and tired of driving down the highway and seeing nothing but clear-cuts. It was at that point where there began a lot of discussions about how we would go about reducing clear-cutting. The answer, quite frankly, is what you saw in the video here this morning. If we're practising that type of forestry in the province, on most stands and on better sites there is absolutely no reason why we can't - you won't be looking at those clear cuts.

Not to say that clear-cutting is bad. If you go to forestry school, they'll teach you that clear-cutting is a very useful tool in terms of managing certain types of forests. I mentioned earlier about that balsam fir, poplar forest are very short lived. The reality is because those trees love sunshine, you can't selectively harvest that type of forest and re-grow it. The only way to re-grow a poplar forest is clear-cutting.

So clear-cutting is not a bad thing; it's just here in Nova Scotia we got very used to the idea that clear-cutting was a very easy, simplistic way of harvesting wood and actually quite lucrative. You can make more money clear-cutting than you can selectively harvesting, at least in the short term.

The average forest in Nova Scotia grows over, say, a 50-year period. To be quite honest, here in Nova Scotia we typically don't let forests grow much beyond 50 years of age before we harvest them. You're looking at about 25 cords to the acre; that would be a fairly safe number.

The type of selection harvesting that the video described over its lifetime - and I'm talking probably 50, 60 years - will allow you to grow probably somewhere in the area of 75 to 80 cords. So if you're patient, you'll actually do much better financially in terms of the amount of wood that you'll grow, utilizing that type of silviculture system.

I'm going to go through my presentation really quick. I'm terrible for talking on and on. You get talking about forestry, we'd talk all day.

Who are we? Well, we're not all contractors. We're actually made up of groups, individuals; "contractor" is almost a misnomer. As you can see, foresters, technologists, silviculture workers, landowners, landowner groups, co-operatives, entrepreneurs, students, farmers, loggers, forest managers - very few people in this business are not hard-working and most of us are rural.

Very few people that are involved in the business of silviculture are in it just for the money because the money is actually pretty tight. Most people are into it because they really care about forests.

What silviculturalists really want to do in this province is repair, restore and try to invigorate every acre of our Acadian forest. There has been a lot of talk within the DNR about how much silviculture is enough - the association's official line is, every acre should be enough.

There are probably 101 challenges within the industry. I took a fair bit of time pondering what I thought might be the top three that I hope you folks would walk away with today. Number one is insufficient funds towards actually performing silviculture work. At present, with the silviculture funding that is in place in the province, we're basically treating about one-third of the harvested forest that - when I say now, I guess I'm talking over the last 10 years. If we were to look at how much forest we've harvested over the last 10 years, we're actually treating only about one-third of it. Two-thirds of it, we're leaving to Mother Nature to do with whatever she will.

Within the DNR, nobody wants to talk publicly about this but quietly, they'll suggest that probably $20 million a year is how much money would have to be spent on silviculture if we actually wanted to treat all of the areas that require attention.

I don't know how much exposure you folks have had to the registered buyer system in the province. The funding for silviculture comes basically from three sources. The system was set up in 1998. I call it the registered buyer system, but it's called the sustainable forestry system, which is another term you'll hear. Basically the idea was - and it's a good idea - that silviculture funding should come from industry, should come from landowners themselves, and from government. The idea was that if each of those three parties contributed one-third on every cord of wood or every ton of wood that was harvested in the province, that money would be put forth to be used for whatever silviculture treatment the government felt was most critical.

There's a lot of discussion right now about whether the system is working well. Personally I think if we tweaked it, like most things, it would be a good system. The biggest problem I have with the system today is I don't think we're actually pulling in enough money. The system is based on how much wood we harvest, so if we're harvesting a whole lot of wood then there's more silviculture money available. If we're not harvesting very much wood then there's very little money.

If you think about what has gone on in the province over the last 25 years, we've actually harvested a huge amount of wood, probably the most amount of wood that has ever been cut in the province has happened in the last 25 years. There were a whole series of factors that caused that; the spruce budworm epidemic in New Brunswick and in Cape Breton created a wood shortage back in about 1980. As a result, the New Brunswick mills, especially in the south, began looking for a source of wood and they initially came to Cumberland County and Colchester, and as they got more desperate, they kept going further and further into the province, away from New Brunswick, to find wood.

Those mills typically were more efficient than Nova Scotia mills at the time so they were able to pay more for logs. So Nova Scotians, including myself, typically sold our wood to those mills in New Brunswick.

The other factor that occurred - it was kind of like a perfect storm - was hurricane Juan. It basically flattened the central region of Nova Scotia back about 11 or 12 years ago. That basically created a whole other huge harvest. In other words, to salvage that wood there were massive amounts of harvesting that went on to basically gather up that wood. So if we go back to my original comment about the silviculture money based on how much we harvest, there was a fair bit of money that was generated as a result of all those harvests - sort of.

If you remember, the system only came into effect in 1998 so in Cumberland and Colchester Counties, for example, all that massive clear-cutting that took place, not a penny of silviculture money was generated from that harvest. However, all that forest is basically ready for pre-commercial thinning and so on. Today we're probably harvesting about the least amount of wood we've had in the last 30, 35 years because of the downturn in the industry. So we're generating practically - well, we're down to about one-third of the silviculture dollars that we used to get but it's happening at a time when we probably need triple the amount of money. So that's one of the issues, I guess, that I have with the whole registered buyer system.

Our association's goal, quite frankly, is to restore all forest lands that have been damaged by harvesting, fire, windthrow, disease, or insects, and we've already talked quite a bit about that.

Our second biggest challenge is this whole business of a shrinking workforce. I know that there's not a sector in our society, I think, that isn't dealing with this. It's no different in forestry. I read an article recently; I think in the next three to five years there are going to be 60,000 forestry positions in Canada coming available, so it's a good time to be in forestry school. The average age of a silviculture worker in Nova Scotia is 51.

This next point I'm going to make is probably one of the bigger issues that our association has been trying to resolve, and it's tough. I mentioned earlier that the registered buyers system came into being in 1998. At that time the provincial government came up with rates for doing the various treatments that we did then and that we do now. It has been

17 years since those rates were established and we're actually being paid the same rates today as we were paid in 1998, with the exception of pre-commercial thinning, and I think we got a 6 per cent increase two years ago on pre-commercial thinning.

Although inflation has been very low over the last 17 years, our actual buying power has dropped 38 per cent as of this year as a result of those rates not changing in 17 years. As an association, we've been working with the corporations and with the government to try to get those rates sort of up to 2015 levels. I have to admit, we've failed and that's one of the reasons I'm here today is that if you can help us with that, we'd appreciate it. I think it says a lot about the silviculture contractors in Nova Scotia that they've actually been able to figure out ways to remain in business, even though they haven't seen a pay raise in 17 years.

Almost everything that we do in silviculture is done on a piecework system. If you're one of those individuals who believes the cup is half empty you'd probably call it a sweat shop system, but in reality most people who work within the silviculture business like the piecework system. If you're very ambitious and hard-working, you can do very well financially with piecework.

I don't know if any of you have done tree planting as a young person, but a lot of university students go West to do tree planting because it's one of the more lucrative ways to make money, but you work for it - it's not easy. The same with pre-commercial thinning; we typically pay by the acre or the hectare for people to do that. Of course in logging, you're typically paid by the ton or by the cord.

I should back up and talk a bit about the piecework system. One of the concerns that has been expressed to us as an association is that young people may not be entering the silviculture workforce as much as they used to, as a result of the piecework system. There are actually very few jobs now in the world where people are not paid by the hour or paid by salary and so there is some discussion about whether or not the whole piecework system should be discarded for an hourly/salary type system. I don't really have an opinion on it at this point. I'm a bit old school, I still like working by the cord; it keeps me honest.

The last item under shrinking workforce is consistent work season. One of the biggest frustrations we have as silviculture workers is that as soon as the snow goes, we want to get to work. Oftentimes we aren't able to go to work until June, or July in some cases, because of government budgets. The silviculture money flows through the government in some cases. I don't understand how the system works, quite frankly, but apparently we can't start work until the budget gets passed and approvals are given and by that time the season for silviculture is half over.

Typically what we do as contractors now is we actually borrow money - as much as we can - and we start work in May. Because we never know what the government budget is actually going to be for silviculture, it's kind of like gambling. You're gambling that you don't do more work than the government comes through with on budgets. If Dave

McMillan does $100,000 worth of work during May and June before the budget numbers come out and the government gives me $50,000, that means I'm out $50,000. I may get it the following year, but that's the kind of issue that we struggle with.

Silviculturalists would like to go to work each year at the beginning of the season. We'd like to put in a long season. Most of the people who work for me do not like unemployment. They'd rather work year-round. I'd like to be able to help them with that and I'm hoping you folks can do that as well. There is something fundamentally flawed in the budget process in terms of getting silviculture money to the folks in the field in April and May when the season actually starts.

So the goals that we would like to accomplish within this challenge - number two of shrinking workforces - we'd like to create a business environment where new and existing entrepreneurs and workers are fairly rewarded for their efforts. Government, quite frankly, controls the environment for fair pay, work season and the relationship between the various players. The players that I'm talking about are the contractors in the field and also the registered buyers.

I mentioned this a few minutes earlier - a registered buyer is someone who buys forest products in Nova Scotia - I think it is in excess of 3,000 tons per year. If you are one of those organizations or companies, then you are required to collect money off each cord of wood you buy. You can either give it to the government and allow them to hand it out for doing silviculture work, or you can decide to have your own silviculture program and hand the money out to contractors yourself, as an organization. Those are the players that I am referring to.

The third item under the shrinking workforce is stop mortgaging the bodies of silviculture workers. One of the problems with paying by the hectare, for example, if we are talking about pre-commercial thinning running spacing saws - FP Innovations, which is a well-respected organization in Canada - they used to be known as FERIC, Forest Engineering Research Institute of Canada - they did a study on silviculture workers, specifically those running spacing saws. This study took place in Quebec, New Brunswick and recently in Nova Scotia. They actually strapped heart monitors on many of the fellows or folks who were actually doing the work.

One of the driving forces, if you are a silviculture worker, is you want to make sure you get the big stamp at the end of the season. The way to do that is you work your butt off for 10 months so that you get the big stamp for the winter. That literally becomes the driving force as to how hard those guys work. They basically will work five to seven days a week to get that $1,000 or $1,200 a week that guarantees them the big stamp during Christmas.

The problem with that is, and the heart monitors that FP Innovations strapped on to some of these folks clearly showed this - they were actually working harder than their body could handle. It wasn't a small problem. I think 10 to 15 per cent of the folks they actually

measured clearly showed that they were actually damaging themselves as a result of how physically hard they were working. Again, that sort of ties in with the whole business of piecework - is it the right thing to do, should there be limits put on how hard these folks are working, and so on. Anyway, it's something our association is taking a look at.

Challenge number three, and this one is a little more complicated - most of the registered buyers in Nova Scotia do not give the government the silviculture dollars they collect from the wood they buy. They actually have set up their own individual silviculture programs and they hand out the money themselves to individual contractors. If you talk to some of the smaller registered buyers, mostly sawmills, they'll often tell you they don't understand why they are in the silviculture business, they are sawmillers, they don't want to be in the silviculture business.

When I asked them why they are actually managing their own program instead of giving it to the government, they will tell you - and this is pretty common - that they use those silviculture dollars to access private woodlots. If you are a sawmill and you want to buy Dave McMillan's timber off his woodlot, then by having your own silviculture program you can sort of dangle that as a carrot. If you let me cut your wood, they say, we will then have silviculture money to either replant or do whatever is necessary to get your woodlot back in shape. That's why most of the registered buyers actually have their own program - they use the money to actually try to convince landowners to sell them their wood.

The problem I have with the system and that the association has with the system is that remember, one-third of those dollars actually come from private woodlot owners. One-third is corporate money, so if - and I'll use sawmill A - they are contributing $1 per ton. If Dave McMillan sells a load of stud wood to that mill, I'm contributing $1 a ton and then the government is contributing $1 per ton, so for $3 on softwood - it's 60 cents for hardwood. So 60 cents for hardwood, $3 a ton is how much is set aside for silviculture.

The corporations or the registered buyers that have collected that money are the ones that have sole decision power about who gets that money, how much, where it goes. So even though Dave McMillan might have sold a company wood, there's no guarantee that I'll actually get access to that silviculture money even though the wood came off my own land. That's another one of those strange little quirks about the system that we'd like you to take a look at.

Because there are about 30,000, thereabouts, private woodlot owners in Nova Scotia, we think those individuals should have some say about where that silviculture money goes, especially because one-third of it is coming off their own land.

Corporations decide who, where, when and how much of the silviculture money is spent. It's kind of like companies managing employee union dues - the same kind of system. I often think, how well would that fly?

The other issue that the association is concerned about is that those corporations and/or registered buyers are responsible for probably about three-quarters of all the silviculture dollars that are actually available in the province. So they actually have the lion's share of the dollars.

If you're a stud mill, basically you're going to want to see those silviculture dollars go towards growing stud wood. If you're a pulp mill, you're probably going to want to see those silviculture dollars going towards growing pulp. So you see that the whole problem of special interest gets into the picture. As a simplistic statement, I'll say the corporations often promote tree farms instead of diverse Acadian climax forest. Again, we think giving the 30,000 private woodlot owners in Nova Scotia more say in how that money is utilized is appropriate. Small woodlot owners should control the funding that they're paying into.

We'd like to move away from the paternalistic system of corporations controlling what happens in small private woodlots. In other parts of Canada, if a company wants to do silviculture work, they'll oftentimes put out bids. The same thing happens here in Nova Scotia. If you want to pave some road or if you want to get something built, you'll get a bunch of contractors to basically bid on the job and the best bidder basically gets the job.

In forestry, that's practically non-existent here in the province. Typically the way it works is if a corporation wants to cut some wood, they'll basically call up a contractor and tell them how much they're going to pay to have a certain job done, and as a contractor, you have a choice. You can either say no, I don't want the work, or you basically accept the price that they attach to the job. In 20 years of contracting, I have never been able to negotiate with a registered buyer in the province - not once. It's very paternalistic.

If you're a contractor in the logging business - just a little bit of a detour - I used to have about $3 million worth of logging equipment prior to 2008. When you're making $75,000-a-month payments on that kind of gear, you basically don't have a lot of choice about whether or not you work or don't work. You basically work. If the company is dictating the rate, then you're basically working for that rate. That's the system that has existed in Nova Scotia - at least within my 35 years of being in the industry, that system has been here, and I'm guessing it has been long before that.

The same thing is true for silviculture. Typically there's no negotiating - and that's partly why the rates have not changed in 17 years. The government believes that competition is a good thing, that capitalism is a good thing. As an association, we're not asking the government to dictate rates per se, but we'd like to see a system where - because silviculture contractors really have no bargaining power at all. You have to remember that most of the companies that are handing out silviculture money, if they had their choice, they'd shut down their silviculture programs today. It's a cost.

It's one of those things where if you spend $1 million today on silviculture, you don't really see the results of that for 50 years, and so you have to be a long, long, long-

term investor if you want to invest in silviculture. That's the reason why most corporations would walk away from silviculture, because the investment is just too long term.

So we really have no - if tomorrow we all went on strike, I think the companies would actually be quite happy because that means they wouldn't have the cost of silviculture. There needs to be some kind of system - and we think it needs to be government-driven because ultimately the whole registered buyer system is a government system. It's a legislated system that the government in 1998 enacted. To our point of view, if we want to tweak it so that all the players are looked after, then government has a responsibility and a role to do that.

The other point I would make to that effect is that after the logging and forest industry crash of 2008, most mills that are actually looking to harvest wood or get wood harvested to feed their mills, are still struggling to make that happen. It's believed that the crash of 2008 took out 60 per cent of the logging harvesting capacity in the province.

I mentioned earlier that to get into the logging business today is a multi-million dollar decision. Very few young people have that kind of capital to actually get into the industry so companies are really, really struggling to try to get entrepreneurs back into the game.

Our fear as a silviculture association is that the same thing is going to happen in silviculture, that as the older generation of contractors retire in the next five to 10 years, very few young people are going to want to come into the industry unless we create an environment now to make it interesting.

In summary, we're passionate about bringing back our forests. We'd like to be paid fairly to do that. We believe that government controls the environment for adequate funding, long-term consistent funding, fair distribution and management of that funding, and fair treatment of small-forest owners and workers. Corporations should not be taking money from small woodlot owners' paycheques and spending it without small woodlot owner input. Thank you.

MR. CHAIRMAN: Thank you, that was perfect timing for me to get my tea and get back, I appreciate that. A very well-articulated synopsis of the industry as it states today from the contractor side.

We'll begin taking questions. I'll start a speakers list here - Ms. Zann.

MS. LENORE ZANN: Thank you very much, that was really interesting. I'm curious, I know when we were in government we were talking about the whole business about clear-cuts and the definition of a clear-cut and how we were going to stop doing the clear-cuts. I know we did have a very robust desire to stop doing as much of it as possible and just keep it to the bare minimum that was needed.

I know there was a question at the time from - I don't know if it was the corporations or if it was the smaller woodlot owners, who had a concern that they didn't have the right equipment to do cuts other than clear-cutting and they said it would cost them so much money to try to change over their equipment, it was going to cost them millions of dollars. Can you talk a little bit and explain a little bit further about what happened, what's happening now - are they up to date now? If you could just sort of clarify all that, I'd really appreciate it.

MR. MCMILLAN: Sure. If you're a contractor and you're in the business of clear-cutting, the type of machinery you would use is a bit different from what you would use if you were mechanically selectively harvesting. Typically in a clear-cut operation you would use a feller buncher, you'd use a processor and you'd use a forwarder to get the wood to the side of the road. You typically buy the biggest buncher and the biggest processor and the biggest forwarder you can find, because in the business of clear-cutting, production is everything. Because there are literally no trees in the way to extract the wood, you can buy the biggest of whatever.

If you want to selectively harvest, you typically want to keep the space between the trees at a narrower point than you would that, say, a feller buncher would be able to actually work its way through. Most of the work that I did during the 17 years that I did selection harvesting for Northern Pulp and Neenah and Kimberly-Clark and Scott Paper, we actually bought our equipment from Europe. We bought equipment from Sweden and Finland. These were machines that were specifically designed to do selective harvesting. They've been doing that for 60, 70 years, so all of the technology that's available is there. In all fairness - and there's a lot more talk about this today - if you want to stay in the logging business today, you'd best move away from feller bunchers and start moving towards Scandinavian-type single grip harvesters. I drove past A.L.P.A. Equipment this morning in Truro. If you look in their yard, there are two brand new, shiny, single grips designed for selectively harvesting parked out front. So the equipment is available.

The problem is those machines run around $550,000 to $600,000; they're not cheap. You've got to have typically 25 to 30 per cent down to buy one and you've got to pay it off in four or five years because it will be worn out in four or five years. Everything is based on running double shift today. If you're running mechanical operations, it's double shift and the rates are based on that so you run double shift and so you basically wear the thing out in about four or five years. If that's an argument today, it's an argument because you don't want to make that change.

MS. ZANN: So do you think most people who are still in the industry today are making that shift? You said you saw it in Truro today, which is great and good to hear, but over the whole province do you see them shifting their - I suppose it's an attitude change too, isn't it?

MR. MCMILLAN: It's more of an attitude change. The technological changes that have occurred in logging are phenomenal. When I was 16 years old, people were still using

horses. I'm not that old. I am, but I'm not. (Laughter) In the last 50 years we've gone from horses to skidders to forwarders to chainsaw from bucksaw to mechanical harvester. The changes are phenomenal and at every step we balked - that will never work. Once you get past that initial mind block, you'll make it work.

Typically what happens is younger entrepreneurs buy into the newer technologies more so than us older guys. So I'm guessing what you'll see happen is that there will be older contractors that stick with the same technology that they've been used to for the last 20 years, and it will be younger, newer contractors or more progressive contractors that will actually make the jump into the newer equipment.

It's a lot harder to do selection harvesting than clear-cutting. You walk into a forest and if you're clear-cutting, you really don't need to know one tree from the other. If they're all coming down, it doesn't really matter. You may have to sort spruce studs from first studs or something like that, but that's the extent of the knowledge that you have to have as an operator.

If you are a selection harvester/operator, you almost have to have a forestry background. You have to be able to identify a spruce tree from a fir tree at 30 feet, at night. You have to be able to identify a tree that has a good crown from one that has a poor one, at night. It's tough. In some parts of the world, tree marking where you basically go in and paint the trees that you want cut occurs, but that's very expensive. We've never done that much in Nova Scotia unless you're dealing with some really high end forest products.

The biggest change, to be quite honest, Ms. Zann, has been within the DNR. They have actually developed some really good tools for foresters to decide when to clear-cut and when to thin. In the video, you saw me at one point playing in the dirt there. I was taking some dirt out of an auger. Soil testing now is one of the key components of determining whether or not to clear cut or to thin. It's not just an arbitrary decision.

Thinning on a black spruce swamp is a mistake. If you thin it, it will blow down. So you do soil testing to determine whether or not the soil is acceptable enough to actually allow you to selectively cut. You look at the age of the trees. You look at where it's located in terms of topography. All of those factors have been built into a system and the DNR has done a fabulous job of creating a system that appears to be working and it's actually being utilized. It's now mandatory to utilize that system on Crown land, and if you are FSC certified as a private woodlot, it's now a requirement. If you want to access silviculture funding for doing selection harvesting or commercial thinning, then you have to have the same test done to determine whether or not it's an appropriate treatment.

It used to be that if a landowner hated clear-cutting, you'd go in and you'd selectively cut, but you did it for purely aesthetic reasons. It was probably the wrong thing to do from a forestry perspective, but it was because the landowner just didn't want to clear-cut. Oftentimes those stands blew down. As foresters, we'd warn landowners that this

is a mistake - we'll do it, but it's a mistake. Sometimes you have to let the mistake happen for the landowner to believe you.

Today we actually have tools and systems where selection harvesting, I think, is well on its way to being established, in the right places.

MS. ZANN: Thank you very much.

MR. CHAIRMAN: Ms. Miller.

MS. MARGARET MILLER: Thank you, David, for your presentation, it was really great. It has been a while since I heard a whole lot about the forestry industry, but I really enjoy hearing it. It brings back a lot of memories of my husband going out and working in the woods and assessing different woodlots and what to do and about replanting. It's something I really, really believe in.

One thing that came up long ago was about spraying. What do you feel about spraying to eliminate some of those species that grow up very quickly so that the more usable wood isn't held back?

MR. MCMILLAN: I guess from a personal perspective, over the last 30 years on my own woodlots I've planted trees and I can tell you that if you don't herbicide, don't plant trees. If you have no intention of herbiciding, then don't bother planting trees because they'll die. Initially as a young forester I felt that I was smart enough that I could figure out how to grow trees without herbiciding, and at 54 years of age I still haven't figured it out.

The big problem, everybody talks about Sweden, and how in Sweden they don't herbicide anymore to grow trees. The big difference between Sweden and Nova Scotia is that we actually have really good soils compared to Scandinavia, on average. If you try to grow trees on good soil then you'll get a lot of other things wanting to grow as well - raspberries, which are probably the most brutal weed if you're trying to grow trees. Raspberries will kill a tree every time. In many cases, if you clear-cut and you plant trees, you'll get either hardwood regrowth or grass, or worse, raspberries. If that happens, if you don't herbicide, you'll lose that new forest.

Roundup is typically the herbicide that's used in Nova Scotia. It's no longer covered under the silviculture program - it used to be, but it was taken off the list four or five years ago, I think. You can still herbicide your forest in Nova Scotia if you follow all the rules. It's a bit of a joke in our industry that when someone asks me, do we herbicide our forests much, I often say no, we save it all for our food. Roundup is used pretty much in every crop, if you're growing food for us here in Nova Scotia. It's only when we want to grow trees that it seems to be a problem. I'm in support of bringing back herbiciding.

MS. MILLER: I found it ironic that at one point the government was saying there would be no spraying of forests and I live next to a golf course that sprays every two or three days, so different priorities and things as well.

I also want to talk a little bit about - you talked about the problem of aging employees, how we need to bring more people into forestry school. Is there a solution there for us? What's the recommendation for a solution to start making that attractive to people? People want to work outdoors, people are looking at lifestyles not just with the bottom line of how much they're going to earn - it would be nice if they could earn a reasonable level. What can we do to encourage young people to get into programs and make programs more accessible for people who would like to work in the woods in silviculture or anywhere in the forestry industry?

MR. MCMILLAN: That's a big question. I think, as you pointed out earlier, working outside, if you enjoy being outside, forestry is a wonderful vocation. I recently visited a surgeon here in Halifax and he asked me what I did for a living. I told him and he said, oh you lucky bastard. Coming from a surgeon, I actually thought he was the lucky guy but no, in his opinion, being outside every day - granted, the flies are bad right now and last winter on those minus-20 days I was thinking about an office job. But other than that, you're right, it's wonderful, I have no regrets doing what I do for a living.

I have two forestry students in their first year working for me this summer. They're both classmates of my daughter, who graduated from high school in Tatamagouche a year ago. Neither one of those young gentlemen really had a feel for what they wanted to do for a career. When they were in Grade 12, I hired them for the summer to work on our farm and during that time we actually did some forestry work. We did some pre-commercial thinning, we did some tree planting and lo and behold, those two individuals are now in forestry school first year. They are doing very well, they are both on the Dean's List and I think 18 kids graduated from Grade 12 last year in Tatamagouche and three of them are in forestry programs.

My sense is that if folks like myself took high school students under their wing for a summer or two and exposed them to the wonders of forestry, I suspect we'd actually have sort of a rebirth, if you will, of folks wanting to get into the industry. It's a wonderful time to get into the industry when you think that, as I mentioned earlier, 60,000 positions are going to be available in the next five years in the industry. My understanding is that the average starting wage is $50,000 to $60,000, so it's not a bad job.

MR. CHAIRMAN: Thank you very much. I remind all the members one question, please. We've got a speakers list here; each of you have snuck in two. Mr. Belliveau.

HON. STERLING BELLIVEAU: Thank you for your observation, Mr. Chairman, I really was paying attention to that. (Laughter)

I can't help, David, but notice that in your slide presentation of your challenges, you talked about insufficient funding and you need to spend $20 million a year, or the government needs to spend that. In your summary you also talked about the inadequate funding, a long-term assisting fund. You were zeroing in on funding.

You got my interest when you said you can't get your industry into the forests as soon as the snow leaves in the first couple of months because you were waiting for the government's budget to be finalized. Now I have an issue with that and I keep saying this, I'm no accountant, I'm no lawyer but I know that when I was in business if my crew wanted a payment, I could give then an advance payment. They would do the work and the money would come in probably a week or two weeks.

That's a simplistic approach to addressing your issue and we're about keeping jobs in rural Nova Scotia, so why isn't there a proposal going to the government saying, give us a projection of what's going to happen in next year's budget and give us that money in advance so we can get those people in and working in those first two or three months of the year, instead of waiting for this budget to be finalized? I'm astounded that that has never been done.

MS. MCMILLAN: You have to remember that the budget is based on how much wood is harvested in the previous year. I think the delay in part is caused by the time required to calculate out how much wood was harvested in, say, 2014. The budget is based on how much wood you cut so if nobody cut any wood in 2014, then the budget is zero. If a trillion tons of wood gets cut in Nova Scotia, then the budget is massive. That's one of the issues that the association has put forth.

Instead of it being based on the previous one-year harvest, why don't we go back four or five years and have a running average, so that it takes out the highs and the lows and provides government, as well as all the other players, with probably a number that you could guess at that is going to be pretty close to reality.

Again, I'm not a bean counter but I don't think a five-year average is a terribly complicated formula.

MR. BELLIVEAU: I'll just follow up . . .

MR. CHAIRMAN: On the same topic.

MR. BELLIVEAU: There's a couple of months that you said are lost.

MR. MCMILLAN: Yes, I know.

MR. CHAIRMAN: Thank you. Mr. Irving.

MR. KEITH IRVING: Thank you for a very insightful presentation. I've wrestled with kind of understanding the forest industry is topical and I have constituents concerned about clear-cutting, et cetera.

I'll try and combine my three questions into one. Clearly the solutions in your mind are asking for more government intervention in the industry, as opposed to market driven. You are pointing to the problems of labour and price, et cetera, that are market driven. In other words, if we lose the labour force - I'm making my question too long. If we lose the labour force or the prices are too low and we lose the contractors, the market would then be potentially filled and adjusted by market-driven forces. You're suggesting government intervention more to solve these, which may be fine.

I would just like to maybe expand on that. Do you have any examples of other jurisdictions similar enough to Nova Scotia that have put in place what you think are the structures and the good policy framework to - who's doing it right? If Sweden is doing it right, but they have a different context and it's not transferable, do you have a jurisdiction or example that you could be shining that information to Nova Scotia to help us better create government policy?

MR. MCMILLAN: I guess the first part of your question - I'm a capitalist at heart and I'm an entrepreneur at heart, so the idea that government should be waist-deep in the process is not what I'm suggesting or the association is suggesting. When we use words like "control the environment" what we're trying to say, I guess, is we don't want you in charge, but you have enough money in the game and you have - because remember, the government is contributing a third of the dollars to silviculture; small private woodlot owners are a third, government is a third and registered buyers are a third. So you've got a one-third say about what goes on with that system.

Because the corporations have all the clout - and the association and the landowner groups and the landowners themselves have practically none - remember, the money that the private woodlot owners are contributing goes right to the corporation and they get to say how it's spent. Small woodlot owners have no say.

So what we're suggesting is tweak the system so that each Spring, or each winter, there has to be negotiations and there has to be consensus between the landowners and the corporations that, okay, this is what the contract is going to look like, if you will, for the upcoming year. That's the kind of involvement that we're suggesting.

In terms of more funding, personally I don't like debt. I don't like the fact that our province is in debt. I don't like the fact that we're living beyond our means. I really don't want the government going out and borrowing more money to help us with silviculture. As an association, we're often asked by the Allan Eddys of the world, what would you do? Quite frankly, my answer is - I would ask more from the landowners and I would ask more from the tax system in terms of land tax.

I pay, I think, 25 cents an acre for taxes on my forest land; in Vermont it's $3. If you want to get that $3 down to $1.50, you put your land under forest management and you sell timber. To me, that is the most amazing system because what it says is that if you're actually selling timber off your woodland and helping the economy of the province, we'll give you a tax break on your land, but if you're not - if your woodlot is basically pure recreational property, then we're going to tax it basically as recreational property.

I recently got a letter in the mail suggesting that maybe the Nova Scotia Government is actually looking at doing exactly what I just described. That's a pretty smart system. As a forester - but more importantly, as a landowner - I'm not really paying that much for silviculture. If I get one hectare of silviculture done on my land, the cost of that is probably around $800. I'm contributing maybe about $150 of that, but someday I or my family will get the full benefit that comes from that $800 investment. That's not a bad deal. So if somebody came along and said, Dave, maybe you should be contributing $2 a ton instead of $1, I wouldn't blink an eye.

So there are some very simplistic ways to actually increase the funding that basically puts the onus on the people, quite frankly, that would benefit the most. I don't want more tax dollars from the government. That's not where I want to go with this. I want to see that money pay down the debt.

MR. CHAIRMAN: Mr. Orrell.

MR. EDDIE ORRELL: Thank you, Mr. McMillan. I guess I have a couple of questions that are close to what we talked about earlier. You say there needs to be up to $20 million spent on silviculture in order to do it right per year?

MR. MCMILLAN: That's an unofficial DNR number. The number could be $100,000 or $100 million, for all I know but we're being told that $20 million would probably do it.

MR. ORRELL: How much money is being spent on it now?

MR. MCMILLAN: I think last year we spent around $12 million. Part of the problem is that I don't have access to all the numbers, especially relating to industry. The Registry of Buyers within the DNR, they would be the folks to actually give you that information but it varies. It's based on the amount of wood that is harvested. I think last year it was around $12 million.

MR. CHAIRMAN: If I might just interject, I think at one of our previous presentations we had from the province on silviculture, those numbers were actually given to us, so if you want to just check with Hansard or back through with the clerk here.

MR. ORRELL: Can I ask one more?

MR. CHAIRMAN: Yes, on the same topic.

MR. ORRELL: What kind of return does that give on the investment that is being made, like tax-wise and employment-wise and so on? Would you have that number, approximately, give or take a couple of million?

MR. MCMILLAN: No, I don't. Anecdotally what I can tell you is that because silviculture is very much - I guess the term we use is motor manual, probably 80 or 85 per cent of all silviculture work is done by hand. So most of those dollars end up going out in wages. I think the number is around 85 per cent of all those dollars actually go out in wages.

That's the best bang for buck, quite frankly. If you are trying to get the biggest bang for your buck, silviculture is the way to go. It isn't spent, for the most part, on huge equipment, it isn't spent on buildings, it's not spent on infrastructure - 85 per cent of it goes towards wages.

MR. ORRELL: So more money spent, more money returned, more money distributed around.

MR. MCMILLAN: In rural Nova Scotia, I might add.

MR. ORRELL: I'm from rural Nova Scotia so I understand that.

MR. MCMILLAN: I don't want to make light of this but silviculture is probably one of the biggest economic drivers in rural Nova Scotia especially in regions where fishing is not a big part of the economy or farming, so if neither of those things are going on then forestry is going on. Forestry typically occurs where there's no farm land or where farm land is poor.

The other thing I might point out is that our forest land base is actually growing. As more and more agricultural land is abandoned, it typically reverts to forest. That has been going on for almost 100 years now. Most provinces in eastern Canada and states in New England have more forest today than they did at the turn of the century, so silviculture is a huge economic driver.

Some of my employees during the nine months that they work, it's not uncommon for us to pay out $35,000 to $40,000 in wages to those individuals. That's a pretty lucrative wage in rural Nova Scotia. You work for it, but that's still pretty good money. It's not minimum wage.

MR. CHAIRMAN: Thank you. Ms. Miller.

MS. MILLER: I met somebody the other day from Calgary; he was here for an official visit. It was the first time he had been in Nova Scotia and he says, you all live in a

National Park. He thought it was just amazing to see our forests and to see what has happened so that's great.

I want to comment to that, to hear you speak about what's going on, we live in such a world of instant gratification, especially with our young people - we want results right now. You are doing work that is going to have maximum results in 40 or 50 years which is so different from the way everything else in this province and everywhere else goes, so that's great.

My one question is about replanting and fill planting. How do you feel the big companies are doing with this - the Storas, the Irvings - and how does that compare to how private woodlot owners are doing? Are they doing an adequate job or are we missing the boat, in some cases?

MR. MCMILLAN: A lot has changed in regard to tree planting. In the late 1970s, 1980s, early 1990s, tree planting was actually a fairly common treatment in Nova Scotia. Typically, tree planting creates monocultures. These are basically forests that sort of look like cornfields - all the trees are the same species, the same height, the same age and so on. We call those tree farms.

What has happened in the last 10 to 15 years, especially on private lands, is that the government - and this occurred during the NDP Government's desire to move away from clear-cutting and so on. There were a lot of changes that occurred behind the scenes whereby, for example, government funding for tree planting on private land stopped. You could not get money from the government to create plantations.

You could get money for tree planting though if you were fill-planting natural stands, which was the government's way of saying that we want to move away from these monocultures that you typically grow and clear-cut like you would corn, and we want to get towards a system where you're managing the forest long term. It's an uneven-aged forest, you have all kinds of different trees, all kinds of different tree species, which is typically what our Acadian forests looked like before Europeans really started influencing it.

Most of the tree planting today that is done occurs on corporate lands. I'm more familiar with Northern Pulp just because they're in my backyard. Northern Pulp plants a lot of trees. They still have a tree nursery and they typically grow those plantations for 35 years, and then they mow them and start over. That's just the type of forestry that works for them. That's not the type of forestry though that the previous government and this government is actually promoting. They're actually spending a lot of time promoting FSC certification, which stands for Forest Stewardship Council. It is considered the most environmentally rigorous forest sustainability certification that exists in the world.

If you as a small woodlot owner put your land under management with the FSC system, you're the first one in line for silviculture dollars. You're potentially the first one

in line for technical advice from the DNR. Basically you become a favourite child, if you will, of the province if you actually are within the FSC system.

Personally, I think it's great. All my land is under FSC management. I'm one of the first in line to get silviculture funding in the Spring, because if you're FSC certified you get preferential treatment.

The flip side of that is that I have to be damn good about how I look after my forest. I have to treat the soil and the water and the trees. If I need to do any clear-cutting, I have to have a very good explanation for the foresters as to why I want to do that and they have to agree. I actually know of woodlots that have lost their FSC certification because they did clear-cutting, for example, without authorization. So it's a very stringent system. It exists, to my knowledge, across the province now. There are many different service providers that are actually doing FSC certification.

I guess to summarize your question about tree planting, if you want to grow trees like corn, full planting - as we call it - is the way to go. If you want to grow a more natural forest, but you've got some openings that need planting, then by all means, go in and fill-plant it - hopefully with a long-growth, climax species like red spruce or white pine or hemlock - and you'll get silviculture support.

MR. CHAIRMAN: Mr. MacLeod.

HON. ALFIE MACLEOD: Thank you for your presentation. When you started out you said that silviculture is all about the three Rs - repair, restore, and reinvigorate - and then you talked a little bit about how you want to challenge and look after the forest where it has been tackled by disease, and you mentioned about the spruce budworm. I guess that's sort of where I want to go because in the 1970s, when the spruce budworm was here, I remember the challenges that created. We had a small mill that we produced slats and sills for lobster traps, and it was a challenge during that period of time because I live in Cape Breton as well.

Now we hear about infestation in New Brunswick and it is moving in our direction. We also had the longhorn beetle in the Highlands in Cape Breton for a period of time and what it was doing. So my question really is, how can silviculture help our industry avoid or attack those types of problems? It's great to be replanting and reforesting, but when Mother Nature steps in, we all know that she's in charge. We might think we're in charge but Mother Nature is in charge and these things are coming. They'll have a direct impact on places like Port Hawkesbury Paper and Northern Pulp. What do you believe silviculture can do to help make that a more palatable experience than it was in the 1970s?

MR. MCMILLAN: If you look back - and I'll use Cape Breton as an example because it's probably the best one - the budworm literally devastated the Highlands, and the reason why it literally mowed down every single tree in the Highlands is that almost every single tree in the Highlands was balsam fir, which was their preferred food species.

In the last 30, 35 years since that last major attack, the foresters that are looking after that part of the province have tried a lot of things; they planted different species, they experimented with different spruces and so on. The trouble is that the Highlands is a very unique ecosystem; it's very high up, it's surrounded by oceans, and it gets weather conditions that the rest of the province have never seen, ever. A lot of those different plantations of different tree species and so on failed.

What they're now doing is actually going in and trying to fragment the balsam fir because balsam fir grows wonderfully in the Highlands, that's what Mother Nature loves to put there and it thrives there. So what they've been doing because we know that the budworm epidemics typically run in a 35-year rotation - it has been going on for 10,000 years, so there's nothing unusual about the budworm moving in every 35 years and flattening everything. Because we know that and because we know it's going to hit us probably in the next three to five years, they've been trying to fragment the balsam fir forest in the Highlands because the Highlands are likely to be where it hits again, or any place for that matter where there's a lot of balsam fir. Part of it is dependent on wind direction and so on because the budworm that actually devastated Cape Breton got picked up by winds from southern New Brunswick, that's how they ended up there.

Nova Scotia is actually fairly isolated, if you think about it, we're surrounded by ocean, except for the peninsula, and it's very difficult for budworm and moose and so on to actually get here, so it was the winds that brought the budworm from New Brunswick to Cape Breton. Can't do much about wind but with all the work that is being done now in New Brunswick in terms of fragmenting the forest, if you break up the balsam fir and have other types of forest in amongst those balsam fir stands, that tends to slow the budworm down. It's kind of like the plate isn't nearly as big or full of its favourite food, it has to really spend time looking around for these balsam firs which it prefers. So if you can break up that balsam fir canopy, that's a solution.

The other solution is Bt, which was the bacteria-based spray that was developed during the tail end of the last infestation. Basically it's a natural-occurring bacteria that kills the budworm, and we've been able to produce it in volumes that we can actually spray it aerially so we can slow down the budworm basically using a bacteria that you find in nature anyway. Those are probably the two big tools.

To be honest, yesterday I was looking at a nice stand of balsam fir on my woodlot and I'm thinking, you know, I should probably cut this before it dies but I don't know, we've got three to five years yet. Quebec, the Gaspé is being hit hard right now; northern New Brunswick is seeing budworm damage in significant amounts in areas. I can tell you there are budworm traps all over Nova Scotia and have been for the last three years. Every one of those traps have budworm in them so the budworm is here now, it's just not here in numbers that cause major devastation. That's where we're at.

MR. CHAIRMAN: Thank you. Mr. Horne.

MR. BILL HORNE: Thank you, Mr. Chairman, and thank you for your discussion. I spent a bit of time in the woods myself but I don't know a lot about it. I do enjoy the open concept of woods on my grandfather's farm in Musquodoboit.

What I do want to ask, though - just comment on it, it probably doesn't need a lot of explanation - is about producing wood for energy that we do here in Nova Scotia. You haven't commented on it as yet, but I'm sure it would be worthwhile knowing what your comments might be.

MR. MCMILLAN: I know this is a very contentious issue in the province. I have been to Finland and Scandinavia and at last count, I think 25 per cent of their total energy needs in Sweden and Finland were being met with biomass. When I tell them about the concerns we have here in Nova Scotia, they shake their heads and they wonder what's wrong with us.

Fundamentally, the issue that the staunchest environmentalists would have is that if you're removing branches, small trees, needles, whatever - the stuff that basically we've left in the forest in the past when we logged - then that's a good thing; it's fertilizer that's adding to the biodiversity of the forest. That's true, but I think the facts are simple - 80 per cent of the nutritional value of biomass is in the leaves and needles. So if you're concerned about removing nutritional minerals and that sort of thing from the forest by harvesting biomass, basically wait until the leaves or needles fall off, and 80 per cent of your nutrients stay behind.

If you're concerned about removing biomass because the amphibians and the micro-organisms that live in the soil and so on are not going to have twigs to chew on, then again, the Scandinavian answer to that would be, fine - leave 10 per cent of the biomass material behind. Leave the leaves and needles and 10 per cent of the coarse woody debris. Their comment is, you can't gather up 100 per cent of it anyway; the available equipment simply won't do that.

I know that Nova Scotia, as part of the work of the DNR has been to try to create or define a set of guidelines for harvesting biomass and I know they're still working on that. But I think fundamentally what they've come up with is that on good, rich, deep soils with hardwood trees, and keep in mind hardwoods drop their leaves every year - basically you're getting a nutritional bath in a hardwood forest every single season in the Fall - you can remove biomass in those types of forests really without any kind of damage to the soil. If you have very poor soils, leave all the biomass. That's sort of where I think the DNR is going with this.

Everybody around us is harvesting biomass. Almost all of the New England States, which have, to be quite honest, far stricter environmental rules than we do, all of them allow harvesting of biomass. Scandinavia, probably the smartest foresters in the world - and Germany - they all allow biomass harvesting. We're the only region, if you will, that

I'm aware of, in the world where we think it's a problem. We actually have better soils than Scandinavia so we should be in a better situation for harvesting biomass.

The other concern I read about in the paper is saw logs being turned into biomass. I've read this complaint in the newspaper that high quality hardwood logs are being sent to the biomass plant down towards Port Hawkesbury. Well, if you're that stupid to send a log worth $100 and convert it into biomass that's worth $5, I don't think I have an answer. If you're that dumb, do it. In a million years I wouldn't send a hardwood log worth $100 and turn it into biomass. That would be like throwing money out your car window. If it's happening, the people doing it are very stupid.

MR. CHAIRMAN: Thank you. We're getting some good news clips. Ms. Zann.

MS. ZANN: First of all, I want to get back to talking about money and finances. You were talking about the type of skill set that a new person working in the industry would need where you need to be able to tell the difference between the different types of trees instead of just clear-cutting them all. It sounds to me like that would immediately make the job worth more money so that these young people who are coming up the ranks who are studying this as a science, would necessarily be able to be paid higher.

Do they get paid a different rate than the ones who would just go in there and, for instance, clear-cut a forest or is it all the same rate at this point?

MR. MCMILLAN: I guess if you look at all the different positions that would exist within the industry, you have contractors who are doing logging, so you have loggers. Most of those contractors are basically paid on a per ton basis, so the more wood you cut, the faster, the more money you make.

If you are talking about a forester who is actually responsible for making the decisions about what should happen to that forest, those individuals are typically on salary, usually working for a corporation. Yes, their skill set needs to be much higher. Typically what you're looking at is if you want to be at the top of the food chain in our industry, you go to university where you get a Bachelor of Science majoring in forestry. If you are not interested in doing that but you still want a formal education in forestry, then you go the route that I did and you basically become a technologist; typically it's a two-year program. The two students working for me this summer are from the Maritime College of Forest Technology in Fredericton and they are smart.

The biggest change I see in the industry from when myself and Mr. Wilson, who has the same background, would have attended is that computerization and satellite imagery and GPS are probably the biggest changes. These two young first-year students are actually teaching me GPS skills that I've been trying to get under my belt for a couple of years now.

Typically in the past if you wanted to timber cruise or determine the volume of wood and the type of wood that was growing on a particular woodlot, you would go out with a tally board and a few pieces of equipment and you would basically measure those trees physically - measure the height, measure diameters, pull out some volume sheets - and you'd manually calculate out what the volume of that stand was.

The latest technology is called LiDAR where basically a plane flies over and using three-dimensional imagery, can actually determine the volume and species of that forest in seconds. That's how much change has occurred in the industry in the last 30 years.

The young people who are going into the trade, if you will, are still getting the same basic skills. They still have to understand tree species and still have to understand silvics, which is the genetic makeup of our various trees. You still have to understand the basics but in terms of the technologies available today - I mean we didn't have GPS, we didn't have cellphones when I graduated from forestry school. (Interruption) I'll be 54 next week, that's not old, is it?

I've been practising forestry for 30 years or thereabouts. In 30 years we've gone from motor manual type technologies to full satellite computerized type technologies. It's a pretty exciting time to get into it if you are a young person. The interesting thing, though, is that there was a waiting list for me to get into forestry school in the early 1980s, late 1970s. Today almost all of the forestry schools are struggling to fill their ranks.

It's surprising. I think we've done a very poor job of portraying what forestry actually is. I don't like to pick on the school system but I remember my daughter coming home from school one day and telling me what a bad man I was because I was a logger. Her teacher has taught the class that logging is bad, I guess. So off to the woods we went and she was a much tougher person to convince than you folks, because I was just rebutting what had already been planted in her brain.

All kidding aside, I think that our school system and ultimately us as foresters - we've done a poor job of actually educating folks about where we're at in terms of forestry today. There's no question that clear-cut forestry was the dominant type of forestry in the 1970s and 1980s and even in the early 1990s, but in the last six or seven years there have been phenomenal changes. This presentation that I've made this morning would have been considered radical 10 years ago. I would have been labelled an environmentalist as opposed to a forester - how dare I? Today, although most companies are moving begrudgingly towards selection harvesting and commercial thinning and so on, economically it's the right thing to do.

I mentioned earlier, if you clear-cut a forest you'll get 25 cords to the acre every 40 or 50 years. If you selectively manage that forest it will replace the volume you take out, through a commercial thinning, every 10 years. So in a way, a commercial thinning is kind of like taking the interest out of the bank account and leaving the principal, and every 10 years the interest is replaced.

So if you have long-lived trees that will continue to take advantage of the increased sunlight and nutrients that happen every time you do a commercial thinning - and in Scandinavia it's not uncommon for them to generate 100 cords per acre, so almost five times the volume within more or less the same time frame. The difference is, Scandinavians are more patient than we are. We want the money now. Scandinavians are more like, oh, it's money in the bank.

MR. CHAIRMAN: We have time for one more. Mr. Belliveau.

MR. BELLIVEAU: You used the words "selective harvesting" as a term for your industry. My observation in the last year or so is that we have seen shortages in firewood. We've seen shortages in flooring - access to flooring. We've seen shortages in wood pellets for the consumer in Nova Scotia. Your industry is all about selective harvesting. Can those issues be addressed with our system?

MR. MCMILLAN: I'll talk about flooring first because those are three very distinct products. I mentioned, or I guess maybe the video mentioned, that the Acadian forest is sort of the junction point between the Appalachian forest of the eastern U.S. and the boreal forest in the north. We do grow hardwoods, but we don't grow them well. If you want high-end hardwood, go to Pennsylvania; go to Virginia; go to the Carolinas. If you want to see the most gorgeous hardwoods that the world has ever seen in terms of cherry, oak, maple and so on, that's where you need to go.

We grow black cherry, but not very well. We grow sugar maple and we do an okay job of growing sugar maple. We do an okay job of growing yellow birch. We do an okay job of growing red oak. But we'll never do a great job unless climate change - and actually that's a factor that might be in our favour in terms of growing high-end hardwoods. We really, quite frankly, don't have the climate to actually grow high-end hardwood.

I'm familiar with a couple of hardwood plants closing in the east. I know they have their reasons for why they think they can't get hardwood logs. I'm cutting firewood right now on my own woodlot and I'm Scottish, so I'm tight. I want every nickel I can out of my wood and so I'm sorting hardwood logs out of that firewood, and right now I'm getting 5 per cent hardwood logs - 95 per cent firewood. So that's how much high-quality hardwood is growing on David McMillan's woodlot. My woodlot, quite frankly, is not a whole lot different than anyone else's woodlot, and that's a problem.

One of the treatments that silviculture funding actually promotes is hardwood crop tree pruning - doing things to improve our hardwood. The trouble is we can make a modest improvement, but we'll never compete with Pennsylvania or Virginia.

We're very good at growing softwood. We can grow red spruce way better than they can in Virginia. We can grow red spruce way better than they can in Quebec or places north and places south. So, quite frankly, we should be growing trees that we're good at growing in terms of our climate.

Climate change is the big thing. There are studies that are being done now, which are clearly showing that certain tree species over the next 50, 60 years are probably on the way out. Balsam fir is probably the number one. Balsam fir is a boreal species. That's why it grows so well in the Highlands, because the Highlands is really a boreal forest, it's one of the few regions of Nova Scotia that is truly boreal. But if climate change warms up then places like - I hope there's no Christmas tree growers in the southwestern end of the province here but they're going to have a bugger of a time growing balsam fir in the southwestern end of the province in the next 50 years because they are having trouble now. The insects they are dealing with are insects they never had before and as the climate gets warmer, the balsam fir simply doesn't want to grow in warm places, it's a cold weather tree. I can see over time where balsam fir will disappear from the southwestern end of the province and maybe eventually the Highlands and so on.

The second product you mentioned was firewood. To the best of my understanding, the shortage of firewood that exists is based on a couple of things; Northern Pulp, because they've had difficulties getting their hands on enough softwood to run that pulp mill, have started using about 100,000 tons a year of hardwood. Those 100,000 tons of hardwood that they are now using historically all got sold for firewood. So that's the big reason why there's a firewood shortage in north central Nova Scotia - 100,000 tons literally, 50,000 cords, got taken out of the market.

The other problem, and I mentioned it earlier, is that everybody is struggling to find loggers. As a result of a whole lot of loggers going bankrupt and retiring as a result of the market downturn four or five years ago, there's just nowhere near as many people actually logging. So that's contributing two things: it's contributing to a shortage of firewood, it's also contributing to the price of firewood. Firewood has actually gone up dramatically in price. Six years ago I was getting $50 a cord for firewood, today I'm getting $100, so it has become a very valuable product because it's basically in short supply.

Your last comment, pellets, sort of ties in with firewood. Again the hardwood that is now going to Northern Pulp, some of that was being converted into pellets, going to Musquodoboit, for example. In the food chain the wood that goes into making pellets is at the low end and pulp mills basically utilize that same fibre, craft mills do, so Northern Pulp would be a competitor to the folks who are trying to buy the same product for making pellets.

Again, because there's a shortage - not so much a shortage of wood, a lot of people are talking well, there's a shortage of wood - it's not so much that there's a shortage of wood, there's a shortage of people to harvest the wood.

Again, there was a program that kind of ties in with my conversation with Ms. Zann a few minutes ago about the new equipment for harvesting. I know the NDP Government came out with an innovation program to get people looking at doing things with new equipment and so on. There were actually a number of Scandinavian harvesters that were bought through that program. It probably was the number one reason why some young

people got into the industry two or three years ago. That program ended and when it ended so did the sales of single grips. Again, for a young person to get into that business, they've got to have $150,000 or $200,000 in their pocket and I think the program basically gave them the down payment, $100,000. So it was maybe something to look at in terms of addressing some of these issues because again it's a harvesting issue.

On the flip side, because there's a shortage of loggers, the prices of everything has gone up - stud wood is up, logs are up, firewood is up, pulp is up. All those prices are up, which in a way is kind of hurting our province because we're actually paying more here in Nova Scotia than other provinces for those products.

MR. CHAIRMAN: Thank you. We've gone a little bit over our time. First off, I'd like to thank you very much. I think the conversation was very clear and frank. I appreciate the people who are actually on the ground giving us their opinion; it's very enlightening. It's probably as close to reality as we hear in here, which is refreshing. I really do commend you, as a fellow forest technician, for the way you showed how you have challenges and hopefully we can meet them.

You have a few moments for closing remarks, if you would.

MR. MCMILLAN: I would just like to say thank you for the opportunity. As foresters and technicians and silviculture workers, we often feel like we're off in the woods and nobody is aware that we even exist, so when we received the invitation to come to such an auspicious occasion - I don't know if you folks feel auspicious, but I sure think you are and so does the association, which is why we put a fair bit of effort into trying to give a good presentation today.

We really appreciate the opportunity to talk about issues because, to be quite frank, we don't have a lot of clout. We try to make a difference, but at this point we really do need a bit of help in maybe addressing some of the issues that we've put forth and hopefully you can help us with that.

MR. CHAIRMAN: We will recess for five minutes.

[10:41 a.m. The committee recessed.]

[10:47 a.m. The committee reconvened.]

MR. CHAIRMAN: Order, please. I'd like to call the meeting back to order.

Next on committee business is correspondence. We had received two pieces of correspondence since the last meeting. I believe everybody has had a chance to review them. I don't know if there's any discussion on them or not. No? Okay.

The next order of business is agenda setting. Maybe if I could just deal with one of the pieces of correspondence here, the one sent November 5th from Kingsley Brown. I believe at our last committee meeting the way that - this was a letter that came to us and we deferred it to this meeting, which is our agenda-setting meeting. Since then I do believe that Mr. Brown has reached out to caucuses, to do presentations to caucuses, to bring us to a little understanding of what their initiative is.

I would suggest that seeing it isn't even on our agenda setting for now, and I do believe that we've also met with Mr. Brown within our caucus, we would reply and say that that's probably the route for us to take with that one. Okay.

Agenda setting, so we'll start with the Liberal caucus. I would like to keep, if we could - we have one more meeting for September, we have one more agenda item for September. So if we picked three or four more, that's going to probably put us out close to another year. I don't want to get really too far out, just so we can keep the topics current, to maybe what some of the issues are. Ms. Miller.

MS. MILLER: Can I bring forward two topics?

MR. CHAIRMAN: No, one please.

MS. MILLER: Just one, okay, the Department of Energy on ocean tech and tidal research. I think that will be a very interesting one.

MR. CHAIRMAN: Would all those in favour of the motion please say Aye. Contrary minded, Nay.

[The motion is carried.]

I will go to the PC caucus for a selection from them.

MR. MACLEOD: I think we would be very interested in having the Mining Association of Nova Scotia come forward. There are a number of issues that they want to discuss.

MR. CHAIRMAN: No discussion on that? Would all those in favour of the motion please say Aye. Contrary minded, Nay.

The motion is defeated.

We would ask you to select another one, please.

MR. MACLEOD: I would like to hear the logic behind that. One of the most important industries in the province and we don't want to talk about it?

MR. CHAIRMAN: We just voted on it so we would like you to offer one more, please.

MR. ORRELL: Could we just get you guys to pick one because every time I come to a committee meeting and we offer up witnesses, all I've gotten is no. Give us a copy - there are four there and we'll vote on it.

MR. CHAIRMAN: You have one right at the very top of your list.

MR. ORRELL: It doesn't make any difference if it's on the top or in the middle. This is what we want to bring forward first.

MR. MACLEOD: Our next choice then would be the Dairy Farmers of Nova Scotia.

MR. CHAIRMAN: Would all those in favour of the motion please say Aye. Contrary minded, Nay.

The motion is carried.

The NDP - do you have a choice?

MS. ZANN: Yes, we do. We would like to bring forward the DNR on the topic of the harvest operation maps.

MR. CHAIRMAN: Would all those in favour of the motion please say Aye. Contrary minded, Nay.

The motion is defeated.

Do you have another selection?

MS. ZANN: Yes, we have the Department of Environment, the consolidation of conservation officers.

MR. CHAIRMAN: Would all those in favour of the motion please say Aye. Contrary minded, Nay.

The motion is carried.

Mr. Orrell.

MR. ORRELL: Is there a reason that when we have our agenda setting and we have an important topic that we'd like to have come present to the discussion - it seems like the ones that are most important to our caucus, and it sounds like the NDP caucus, keep getting

turned down. We put these forward and we don't get a reason why they're turned down. If we could get a reason why they're not wanting to discuss this at caucus or at the committee, we'd like to hear it, please.

MR. MACLEOD: It's pretty simple. The Mining Association . . .

MR. CHAIRMAN: Order, please. I'd like to recognize a speaker. Mr. Belliveau had his hand up.

MR. BELLIVEAU: I take some issue with this, but in my observation we should reorganize ours and put down the fourth first and the first fourth, and that way with reverse psychology we would get it - just a strategy.

MR, CHAIRMAN: Mr. MacLeod.

MR. MACLEOD: Just to that note, that doesn't work because I went with number three and they still voted it down. The reason they voted down number three is because they had made promises in their election platform to the Mining Association, they didn't live up to them, and now they won't even have the courtesy to give them a hearing as to what it is about.

As far as the other issues that we had there, it should simply be - you get a choice, we get a choice, they get a choice and around the table. The reason they're on the list is because they are important to our caucus so therefore, in the rotation of fairness, which I believe is the premise behind this committee, each caucus should be able to name their item and it should be - one, two, three - one, two, three. Not no, we made a mistake, we didn't like what we did to those people so we don't want to hear them say anything in public. That's not fair.

MR. CHAIRMAN: Thank you - appreciate your comments. We would like to pick one more. Does the Liberal Party have one more selection they'd like to see for agenda setting? That will give us five. Mr. Irving.

MR. IRVING: The wild blueberry sector, please.

MR. CHAIRMAN: Would all those in favour of the motion please say Aye. Contrary minded, Nay.

The motion is carried.

That gives us our next agenda list that we have - selections from all groups that were brought forward. I suggest we adjourn.

MR. ORRELL: We're not going to get another choice? We're just going to do four?

MR. CHAIRMAN: I think that's what the discussion was at first. That puts us out at five.

MR. ORRELL: Could we flip a coin?

MR. CHAIRMAN: That's almost taking us out one year now, so to keep current with what we have, I'd like as chairman to set it at a limit.

We stand adjourned.

[The committee adjourned at 10:54 a.m.]