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# NB Herbicide Use Fact Sheet

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Everything you need to know to write an effective letter to eliminate herbicide spraying in our forests!

Concerned New Brunswickers

1/1/2014

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## Summary of the Issue

The issue of herbicide use on publically-owned land and its impacts on forests and wildlife that belong to the people of New Brunswick requires the understanding and input of the public; there is great need to get the facts straight. For years, letters have been written by politicians, provincial bureaucrats and forest companies that dispense partial truths and downright lies. This short handout is intended to clarify facts on these statements and the actual impacts of herbicide to the forests and wildlife in New Brunswick. We start with routine statements that always occur in documents defending the use of glyphosate in Forestry:

## Herbicides in New Brunswick: True or False

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### False Statement

“The inability to use herbicides will cause a loss of jobs within the forest industry”.

### False Statement

“The Crown land herbicide program is essential to the future of the NB forest industry”.



### The Truth

This at best is a poor prediction, and at worst is fear-mongering. Far more jobs in the forestry sector have been lost in the past 20 years due to “modernization” and “efficiency” than would ever be lost switching to a different means of hardwood control in plantations. For example, forestry jobs are down dramatically since logs were harvested with chainsaw and skidder. Further – the use of spacing saws to remove competing hardwoods will actually CREATE upwards of one thousand good paying jobs. Quebec does this successfully today.

### The Truth

While inflated Annual allowable cuts (AAC's) are only possible through a strategy of producing high yield softwood plantations, how you achieve these high stocking rates should be open for debate. Herbicide use is the cheapest means of removing competing hardwoods (Approx. \$180/hectare); however, this statement inaccurately assumes it is the ONLY way. This is totally false. Thinning crews utilizing spacing saws can effectively remove hardwoods (Approx. cost \$600/HA). This method was abandoned because forestry companies make more money using government funded herbicide programs. This issue is not about what is “essential”, but about what is most profitable.

**False Statement**

“Studies following herbicide application in softwood plantation have shown the same species representation after treatment as before treatment”.

**The Truth**

This statement is based on studies OUTSIDE NB and on herbicide use OTHER than glyphosate and further – it is assumed that the presence of one single hardwood tree means it is “present”. Actual plantation stocking rates from NBDNR regeneration data as well as forestry based glyphosate studies clearly demonstrate that nearly ALL glyphosate-treated plantations in New Brunswick are 90-100% stocked with softwood trees because glyphosates has effectively killed all hardwood species and removed them permanently from treated sites. THIS IS WHY Glyphosate IS USED! Not only does field data and forestry-based glyphosate research bear this out (Table 1.), but anyone who has driven by NB plantations, walked through them or flown over them know for a fact that this statement using “representation” is grossly inaccurate and a distortion of the truth. For example, reducing hardwood stems from 30,000 per hectare to less than hundreds per hectare may technically qualify as still being “represented”, however, the drastic and permanent change to the Acadian forest for an entire human generation is undebatable.

**False Statement**

“Herbicide use is not harmful to wildlife”.

**The Truth**

While this statement in itself is debatable, many studies specify that it is not only the toxicity issues of herbicide; it is the HUGE impact herbicide has on killing tons and tons of hardwood browse and other plants deer require that impacts wildlife.

Browse source	Reduction	Time Frame	Source
Raspberry (no./ha)	52-59%	1 year post-spray	Freedman et al. 1993
Hardwood Foliage	75-95%	1 year post-spray	Santillo et al. 1989
Hdwd stems/25m2	66-99%	1 year post-spray	Santillo et al. 1989
Raspberry	65-88%	1 year post-spray	Santillo et al. 1989
Maple	>90%	1 year post-spray	Horsley and Bjorkbom 1983
Hardwood browse	73%	1 year post-spray	Lautenschlager et al. 1999
Deciduous trees	82%	1 year post-spray	Bell et. al. 1997
Hardwood leaves	70%	1 year post-spray	Vreeland et al. 1998
Deer Browse (stems/ha)	53-97%	1 year post-spray	Reynolds et al. 1997
Maples (no./ha)	33-64%	1 year post-spray	Freedman et al. 1993

Birches (no./ha)	89-93%	1 year post-spray	Freedman et al. 1993
Leaf area index	47%	1 year post-spray	Reynolds et al. 1997
Ungulate browse use	57-75%	2 years post-spray	Eschholz et al. 1996
Deciduous browse	70%	2 years post-spray	Raymond et al. 1996
Ungulate Browse	"significant"	3 years post-spray	Hjeljord and Gronvold, 1988
Ungulate browse	75%	2 years post-spray	Connor and McMillan 1990
Aspen	50-100%	4 years post-spray	Sutton 1984
Aspen (stems/ha)	88.8%	5 years post-spray	Pitt et al. 2004
Deer browse	90%	6 years post-spray	Savidge 1978
Ground cover	"sparse"	6 years post-spray	Sutton 1984
Maple (no./ha)	64-70%	6 years post-spray	Freedman et al. 1993
Birches (no./ha)	69-83%	6 years post spray	Freedman et al. 1993
Hardwoods	"most" (over80%)	7 years post-spray	Pitt and Bell 2005
Hardwood leaves	33%	7-10 years post-spray	Vreeland et al. 1998
Shrub Dominance	"reduced"	10 years post-spray	Boateng et al. 2000

## The True Impact of Herbicide Spraying

The herbicide used on Crown land the past 20 years is called "Glyphosate". It is by far the most powerful and effective herbicide used to kill hardwoods in the world. It is the herbicide of choice because it is so effective at permanently removing hardwoods (Table 1.). Other less effective herbicides have been used, and unfortunately it is the results from these weaker herbicides that are quoted to give the appearance that herbicides are not effective and not damaging. There are three major concerns with the use of Glyphosate in New Brunswick Forestry – Health, Wildlife & Habitat and Jobs & the Economy.

Quebec banned Glyphosate use on forest regeneration in 2001. The reasons cited related to potential health issues, habitat destruction and the job creation benefits of mechanical thinning. If Quebec was able to come to this conclusion over a decade ago, why are we still allowing it?

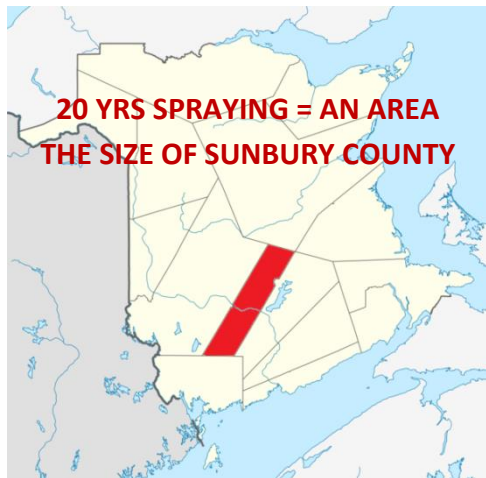
### Health Concerns

While the industry and proponents of glyphosate emphasize how benign glyphosate is – it is the adjuncts and chemicals used to suspend and deliver it that are extremely harmful and seldom tested. Research results on glyphosate impacts are very divergent – some suggest little impact, others suggest much more harmful impacts.

At present, the federal government is reviewing the impacts of glyphosate in light of emerging research that shows new and complicated problems on everything from aquatic wildlife to invertebrates to problems in human reproductive tissue. In addition, the surfactants and emulsion components to glyphosate cause many more problems. Nearly 130 municipalities across Canada have passed bylaws phasing out most herbicides from residential yards, parks and other stretches of grass. Glyphosate would be the most commonly used. If this herbicide is so safe, why are so many agencies and jurisdictions abandoning its use?

## Habitat and Wildlife

DNR and the forest industry constantly suggest that only 1% of the forest is sprayed annually, trying to make the use of herbicide spraying look small. Translating this into layman terms puts the size into perspective. This 1% represents an area of 13,000 hectares each year – or over 26,000 acres. This land mass is equivalent to an area over half the size of Fundy National Park, a strip nearly a mile wide running from Fredericton to Saint John, or in other terms, the size of the city of Moncton (130 km<sup>2</sup>) – a HUGE piece of real estate.



In terms of area sprayed, 26,000 acres every year for 20 years equals 1/2 a million acres of land.

This is 260,000 hectares of area, or 2,600 square kilometers, an area approximately the size of Sunbury County. An area that is now essentially devoid of suitable habitat for whitetail deer and many other species.

To quantify the impact this spraying has had on deer alone, consider this. An acre of regenerating land can produce between 20,000-40,000 stems of hardwood, equaling a ton of deer food per acre. That is 26,000 TONS of deer and moose browse lost to herbicide spray from CROWN land every year. Deer consume on average 2 kg of browse daily, so the annual herbicide spray program removes enough food to feed approximately 26,000 deer per year.

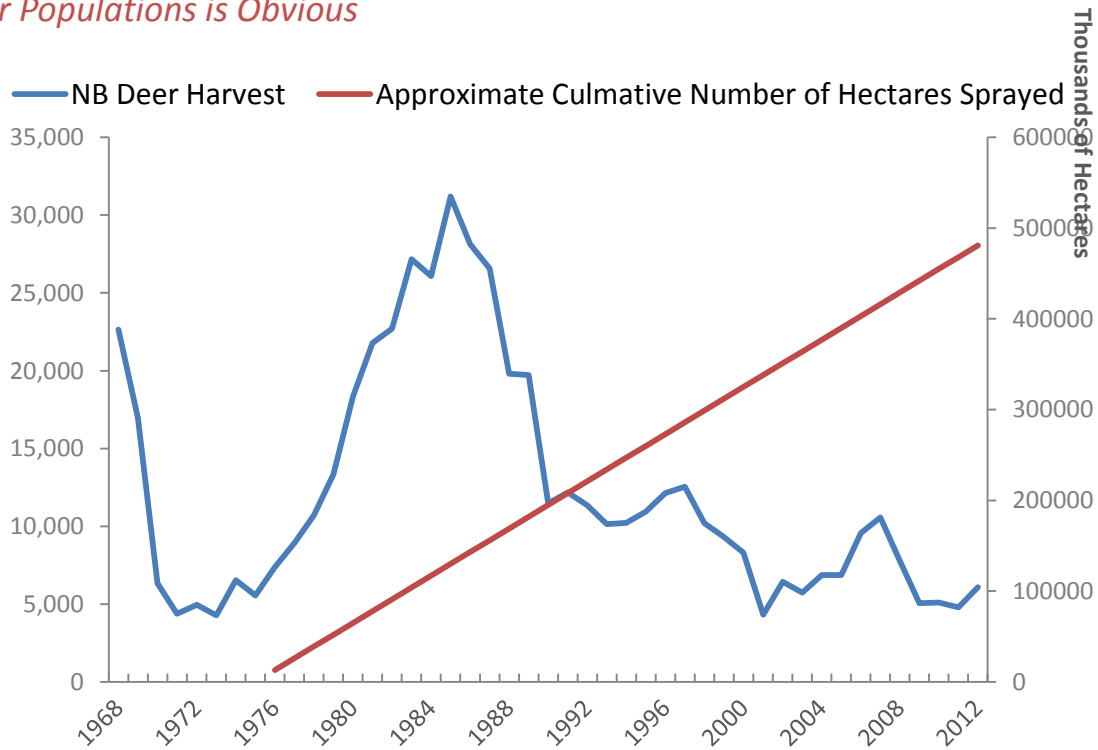
Given these figures, herbicide use for the past 20 years on Crown land has removed over ½ a MILLION tons of deer and moose browse. In pounds – it equals over one BILLION POUNDS of food for deer and moose killed in the past 20 years. To suggest this does not impact deer and moose numbers on Crown land is absurd.

Not only is it the AMOUNT of land sprayed, but also WHAT TYPE of land is sprayed. Mountain tops, rocky soil, wet and poorly drained areas are NOT planted, and never sprayed. Yet these areas are INCLUDED in the landbase they assume to be areas that will support wildlife. If spruce won't even thrive there, it is not likely ideal wildlife habitat. Meanwhile, the BEST sites with the highest SITE INDEX – meaning the best soils and located in the best areas – along streams, well-drained, rich sites that once supported most of the provinces wildlife.....it is THESE AREAS that are targeted for planting, and then are herbicided to “protect the investment”. Forestry companies are taking the best CROWN LAND for themselves, and leaving the poor sites for the public and for wildlife.



The NB forest management strategy has slowly and steadily caused the demise of the Crown land deer herd. It is almost solely focused on production for forestry uses. The concerns of wildlife have played second fiddle.

*The Correlation Between Loss of Food (Spraying) & Decreased Deer Populations is Obvious*



Scientists and biologists have worked to save deer yards for over 20 years knowing a wood shortage was coming and pressure to cut these areas would be immense. However, many of the harvested and sprayed areas over the last 20 years occur close to and around designated deer yards....removing important deer food that is required during the period of highest stress for deer. For years DNR has assumed that COVER is key to deer yards when in reality it is FOOD that is most important. Why might this be?

Forestry companies are beating down the door with a desire to cut these deer yards. The forest management strategy has definitely worked, and many deer yards are now vacant due to a methodical elimination of food sources in close proximity to the yards. Now, even during periods of good deer herd growth (2004-2007), deer do NOT return to these deer yards. This plays exactly into the hands of the forestry companies. Now that they have succeeded in vacating the deer yards, this is the exact argument that forestry companies use to pressure government to CUT the deer yards....because they are vacant!

When people question our elected government about these issues they are given the party line that deer yards are vacant, there is no harm using glyphosate, and that it is only used on 1% of the land base.

It becomes very obvious when we observe where deer currently winter now that Crown land has been destroyed. Deer winter around houses and communities and use very little for cover as long as ample food occurs.

## **Jobs & the Economy**

One of the biggest issues facing the NB government is the inability to create jobs for rural New Brunswick. Using thinning crews to remove hardwoods in place of herbicide use will create good paying jobs and does not carry with it the threats and damage that herbicides do. Based on a simple calculation of replacing the spray program on each 13,000 hectare cut with a thinning program, it could conservatively create upwards of **one thousand direct jobs annually**; not including any additional spin off for equipment suppliers and an increased tax base that **could conservatively add \$ 6-8 million dollars** to the government coffers allowing them to pay for much needed roads, hospitals and schools.

Utilizing thinning crews instead of herbicides is not about companies losing workers or going bankrupt. It is about a slight reduction in corporate profits. Companies will still reap profits, but not quite as much as they can on the backs of a taxpayer-funded spray program. Companies in Quebec have been doing this successfully since 2001, so can New Brunswick.

Finally, spraying is also placing a hidden burden on private land owners. Because of the spraying, deer have been forced to private land where good food still grows. Thus, the responsibility to produce deer has shifted from the government (by properly managing Crown land), to the shoulders of the public, and at the public's expense. Further, increased deer numbers on private land are starting to create nuisance deer issues that government has refused to provide solutions for.

## What Can You Do?

Our voice needs to be heard on this issue. Sending a customized email or letter to your elected representatives can make this a real issue in the upcoming election. **We are asking you to take the time to email or even better mail a letter**, based on the one below but with as many additional points you would like to make (using the data provided above) to the email list provided below. Reply to and refute any false correspondence you receive, again using solid facts. Finally, ask all of your friends and family to do the same. Share this on sites like Facebook and with any outdoor groups you are a member of. Together we can stop this.

## Sample Letter

Hon. Premier Alward,

Using glyphosate on Crown land the past 20 years has had a dramatic effect on the structure of the Acadian forest – as has been pointed out by a federal research expert in our province. Its use has been questioned by an award winning forestry researcher at UNB. It has dramatically reduced the Crown land carrying capacity for deer and forced the future growth of our herd onto the backs of taxpayers of this province who own the lion's share of private land; municipalities and farmers bear the brunt of nuisance wildlife damage at their own expense while you defend the use of this product so forestry companies can realize higher profits on the backs of a taxpayer-subsidized chemical application program and at the expense of creating jobs for rural New Brunswickers.

We are confident that when the average New Brunswicker realizes these details along with the growing body of research that has been ignored, this issue will take on a whole new importance in the next provincial election and the choices you make in addressing this matter will sway the direction of my vote.

Respectfully,  
----<Name>----

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## Complete MLA List with Ridings

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44	Fredericton-Lincoln	Hon. Craig Leonard (PC)	Craig.Leonard@gnb.ca
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### **Mailing Address List for Premier and Minister of Natural Resources**

#### **HON. DAVID ALWARD**

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Premier: Office of the Premier , President: Executive Council Office, Minister responsible : Premier's Council on the Status of Disabled Persons, Minister responsible : Citizens' Engagement, Minister responsible : Office of Government Review

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#### **HON. PAUL ROBICHAUD**

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