

To: The Office of Governor Paul LePage

From: Alex Gillis, University of Maine Fort Kent

Subject: The Assessment of American Beech as an
Acceptable Species for Clearcut Regeneration

Clearcutting in Maine is currently a commonly practiced forest operation. Clearcutting is currently regulated within the state government under the Forest Practices Act (FPA). The state of Maine currently allows any "Acceptable Growing Stock" to be considered as acceptable regeneration, this includes American beech, however the current beech bark disease epidemic renders these beech invaluable for both timber and forage production. Beech bark disease is a fungal infection brought on by the damage and feeding of the beech bark scale. Currently there are no insecticides or fungicides capable of controlling this disease. Many trees do not live past 20-30 years, and as these trees die either by cutting or disease, more sprouts regenerate creating a thicker growth of beech than before. This thick beech regeneration chokes out more valuable regeneration such as yellow birch and sugar maple, thus leaving the forest to essentially choke itself out. If the regeneration of beech is allowed to continue through ignorance or negligence of landowners, our hardwood forests may slowly become a monoculture of an invaluable specie.

The FPA currently regulates the size and distribution of clearcuts within the state. The FPA regulations apply to any clearcut over 5 acres in size. These regulations do not apply to landowners who own less than 100 acres of land statewide, or for land that is under a change of use plan. The FPA also regulates regeneration within clearcuts. Clearcuts are required to regenerate to certain stand requirements, including being stocked, or occupied, by at least 450 trees per acre of acceptable growing stock within 10 years of the harvest. The FPA currently

identifies “acceptable growing stock”, as any living commercially valuable species that are not a cull and are able to produce merchantable products. A “commercially valuable species”, is defined as any tree species capable of growing as a tree in Maine, with the exception of striped maple, mountain maple, willow, flowering dogwood, grey birch, and pin cherry. While American beech is currently considered to be acceptable regeneration, it does not offer any benefits to the forests of Maine.

The forest lands of Maine, whether owned by commercial or private landowners, is a natural resource that directly impacts many people in the state. The most direct impact comes to those who work on these lands themselves. This issue effects the timber industry as well as wildlife. When a clearcut is allowed to regenerate to beech whips, the whips become dominant in the regeneration and chokes out the sugar maple and yellow birch regeneration. The sugar maple is an important winter browse species for moose. As many of you may know, the state moose population is already struggling due to the increased population and range of ticks. The lack of food from poor timber harvest practices only increases the burden on the moose population. Beech nuts are a common mast staple for many species of wildlife, but the infected beech rarely if ever reach an age and size where they are able to produce nuts, therefore even the diseased trees offer no food. This natural conversion of site from productive to non-productive forest also negatively impacts those working on it. As more land is regenerated to beech, which becomes diseased, the land is unable to produce merchantable forest products. With the decrease in available high grade hardwood forest products, markets within the state will be stressed to find the wood they need and will be forced to do business elsewhere, effectively shutting down some wood markets in an already struggling state. I had the opportunity to speak with a silviculturalist at one of the largest land management companies in northern Maine, and he raised the point of

“Why take your land and invest your time and effort to regenerate a value-less product that will ultimately control your forest?”.

Current available methods of control for the Beech Bark Disease are limited, with most controls being labor and time intensive, as well as expensive. The most common control used is referred to as “beech whipping”, where young beech trees, known as whips, are harvested by fellerbunchers. These cut stumps are then sprayed with an herbicide, which is drawn into the root of the tree and kills the tree. These treatments are very costly. At best, the cut beech whips are able to be chipped and sold as biomass if they harvest site is close enough to a biomass plant. These biomass operations only bring in enough to break even. In areas where biomass plants are not easily accessible, the landowner or land manager is forced to pay out of pocket to conduct these operations, with no return on investment. The most cost effective method for most landowners who are clearcutting land that regenerates to beech is an aerial herbicide application. This herbicide kills the beech but only temporarily harms the maple, and the maple is able to be growing healthy again in a few years unimpeded by the beech.

Beech regeneration is usually controlled well by larger, invested forest land management companies who own land or manage land for stockholders. The main target for many of these landowners is to actually rid their hardwood or mixed growth stands of the beech, in effort to remove it from their stands completely. The beech issue becomes a larger issue in the case of smaller landowners. For many years there has been a mentality of buying land, harvesting all the timber on it, and either reselling the land for cheap or keeping the land but putting no further care into it. While these landowners may follow the regulations set forth by the FPA and state of Maine, they are not practicing good silviculture because many time these hardwood stands can be left to regenerate to beech. These stands soon become monocultures of beech. This is an

issue because the stand is no longer productive for sustaining wildlife, producing timber, or is usable for recreational purposes.

With the removal of American beech from the list of acceptable regeneration for clearcuts, we will be taking a step in the right direction to improve the health of our forests as well as slow down the beech bark disease. The enforcement of this new regulation will be relatively easy and will incur no extra cost or need for new employees for the Maine Forest Service. The Maine Forest Service already enforces the FPA regulations. All that is asked of the state forest rangers is to discount American beech in their clearcut regeneration plots.

Through my assessment of the American beech as an acceptable clearcut regeneration species in the state of Maine, I have come to the conclusion that the American beech is not an acceptable regenerative species. This is why I am suggesting that the American beech should be removed from the list of acceptable regeneration species and added to the list of unacceptable species. I believe with this change in laws, the forests of Maine will become healthier and more productive in many ways for years to come.