

Glyphosate would put our forests at risk



In 2017, British Columbia has spread glyphosate over nearly 12,800 hectares of its territory.

PHOTO: COURTESY / JAMES STEIDLE

Maxime Corneau

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The use of glyphosate favors conifer plantations, but destroys a flora that plays a role in fires. Voices are rising in British Columbia against its use.

Each year, thousands of acres of Canada's public forest are sprinkled with glyphosate, which kills hardwoods such as aspen and herbaceous plants. Conifers tolerate a certain dose.

The use of glyphosate makes it possible to have much more homogeneous plantations, in which conifers have almost no competition.

Since 1990, almost 3.5 million hectares have been sprayed in Canada, almost six times the size of Prince Edward Island.

"An outdated concept"

In 2017, the town of Williams Lake in northern British Columbia had to be evacuated due to a major forest fire.

Two years later, researcher Lori Daniels of the University of British Columbia (UBC) conducts inventories on the site of the old fire to understand its dynamics.

Recognized as one of Canada's leading wildfires, she believes the province, by allowing the use of glyphosate, promotes the spread of fires.

"I think this is an outdated concept," she says. In 2017, the province authorized the application of glyphosate on nearly 12,800 hectares of its territory.



Lori Daniels is recognized as one of Canada's leading wildfires.

PHOTO: RADIO-CANADA / MAXIME CORNEAU

Daniels explains that deciduous trees and grasses that grow naturally as a result of logging play a vital role in wildfires.

"Hardwoods, mainly aspens in this region, will affect the moisture content and temperature of the soil, which influences the behavior of the fire.

When a fire spreads on the ground and it reaches this type of environment, the fire will move or burn much less intensely," she says.

Increase resilience

According to Lori Daniels, the province should reconsider the use of the herbicide in forestry to promote greater diversity.

When glyphosate is used to kill aspen and competitive vegetation, the word "competitive" is crucial. These plants compete with conifers that we want to grow to have a strong forest industry. It means that we put only one value, the financial value, before all the other values.

Lori Daniels

The professor adds that large monoculture conifers are also more likely to be struck by insects and diseases.

It's time we rethink and transform our management of the forest, she says. We must think about increasing diversity to increase its resilience. Our territory must be managed to be better prepared for fires and pests.

With climate change, it is these disturbances that will determine the future of our forest , she adds.



A burnt forest near Williams Lake.

PHOTO: RADIO-CANADA / MAXIME CORNEAU

" This makes me furious "

For several years, James Steidle, a woodworker in the Prince George district of northern British Columbia, has been campaigning in the environmental group Stop The Spray BC to stop the glyphosate application.

In this region, glyphosate is used extensively by the industry as aspen return in thousands after logging.

Steidle says the industry must get rid of the majority of hardwoods on the cutting grounds to meet government standards. This regulation requires that, a few years after logging, coniferous stands must dominate.

"It hurts to see some species of our forests disappear".

James Steidle

"I like aspens, I grew up surrounded by aspen forests. These trees are part of our forests. And now we have a coniferous forest industry and the government saying, 'We are going to get rid of these trees, they are no longer part of the forest'. It makes me furious," he says.



James Steidle poses in front of hardwoods killed with glyphosate.

PHOTO: RADIO-CANADA / MAXIME CORNEAU

In a plantation where glyphosate was used a few years ago, thousands of pines now reach a few meters high. When walking in this forest, one sees the dried trunks of aspen and birch, which swarmed before the application of herbicide.

James Steidle is worried about this monoculture ravaged by a fire. But he also deplores the loss of biodiversity.

"I think there are many things that forestry does not consider. We look at the forest like a farm where we grow carrots, and if it's not a carrot, we get rid of it. But a forest, I think it's more complicated than that," he says.

Glyphosate persists in plants

Researcher Lisa Wood, from the University of Northern British Columbia (UNBC), is interested in how long glyphosate lasts in the environment.

In the UNBC research forest, she sprayed plants with a small amount of glyphosate to understand the behavior of this herbicide when the plants survive.

Her findings surprised the scientific community.



Lisa Wood, UNBC researcher.

PHOTO: RADIO-CANADA / MAXIME CORNEAU

"There is strong evidence that glyphosate is present in plants for at least a year. And now we're looking at the maximum persistence period," says Wood. Maximum persistence has not been established.

"There are glyphosate molecules in these plants and we do not know until when there will be. The public must be aware that glyphosate persists longer than originally reported," she continues.

Lisa Wood's assistants are also interested in deformities caused by surviving plants. The researcher mentions that these physical mutations could, for example, influence the behavior of certain pollinating insects. These searches are still in progress.



A deformed plant after being sprinkled with glyphosate.

PHOTO: RADIO-CANADA / MAXIME CORNEAU

"Toxicity, immediate death of plants; these aspects have been extensively studied," says Lisa Wood. "But the small details [...], the details that we do not see at first glance, these require more time for us to really understand what is happening."

Sheep reinforcement

Near Chetwynd, on the lands of Saulteau First Nation, glyphosate is no longer welcome. The First Nation has asked forest companies operating on its territory not to use any more.

Instead, she offers companies to lease her flock of 400 sheep for brushing without the use of a chemical agent.

It is the best tool that is not chemical to control vegetation. It's like a lawn mower. They do not eat conifers, but they eat everything else. When they have finished, all the vegetation has become fertilizer and the plantation has a free field, details the shepherd Dennis Loxton.



Sheep eat the majority of plants except conifers,
PHOTO: RADIO-CANADA / MAXIME CORNEAU



According to Shepherd Dennis Loxton, the use of sheep is "the best non-chemical tool to control vegetation".

PHOTO: RADIO-CANADA / MAXIME CORNEAU

The use of sheep represents a new business model for the Saulteau community. In addition to being an alternative to glyphosate, the herd also becomes a food source for the First Nation.

Moose decline

In recent years, the Saulteau First Nation has seen a dramatic drop in the moose population, says community biologist Julian Napoleon. According to him, the use of glyphosate is partly responsible for this drop in population.

When they use glyphosate, they eliminate the shoots of plants that usually come back on a cut and that normally constitute the diet of deer. It greatly diminishes biodiversity. These cuts are massive and now the animals are forced to live in small areas of mature forest, he says.

But the opposition to the glyphosate of the First Nation is not due to the scarcity of moose. The biologist is also concerned about the persistence of glyphosate in berries picked by the community.

Community members pick berries from logging. With the persistence of the herbicide in plants, it is present in these small fruits, notes Julian Napoleon.

We must now worry that our diet is potentially carcinogenic? In my opinion, this is a violation of our fundamental rights.

Julian Napoleon

The British Columbia Ministry of Forests refused to give us an interview. However, a spokesperson told us that the use of glyphosate in the forest is governed by regulations and that the practice is declining.