

GENETICALLY ENGINEERED POPLAR TREES IN THE PACIFIC NORTHWEST

SPECIES (POPULUS SP.)

BY GLOBAL JUSTICE ECOLOGY PROJECT &
THE CAMPAIGN TO STOP GENETICALLY ENGINEERED
TREES



Background

Over 30 species of poplar grow in the Northern Hemisphere, many in North America. Poplars native to Oregon include black cottonwood, quaking aspen and narrowleaf cottonwood. Many poplar species, such as cottonwood and quaking aspen, are fast growing species that can disperse their pollen over great distances. Oregon State University, University of Washington and Washington State University have active test plots of genetically engineered (GE) poplar trees.

Traits

Current genetic engineering research is exploring faster growth rates, reduced lignin content, herbicide tolerance, pest resistance, disease resistance and more. There are currently almost 100,000 acres of fast growing non-GE hybrid poplar plantations spanning the Pacific Northwest (PNW) from southern Oregon to British Columbia, Canada. Advocates envision an increase of these plantations in the PNW by 400% to meet biofuel, biomass and paper demands, with a transition from the present hybrids to genetically engineered poplars.

Washington State University researchers are also seeking approval to plant field trials in New Mexico of poplars genetically engineered to produce a rose scent, for use in the fragrance industry.

Risks

Genetic Contamination – Since poplars are so widespread, with many wild relatives, contamination of non-GE poplars by GE poplars, in plantations and forest settings, is likely. Pollen from most poplar species is very light and can travel great distances in the wind.

Less resilient forests – Lignin makes trees strong and aids in resistance to attack from pests and pathogens. Since mortality from insects and disease is an important component of forest health, if trees engineered for reduced lignin contaminate wild poplars, the overall impact on forest health could be devastating.

Trees with reduced lignin also store less carbon and decompose more quickly, releasing carbon into the atmosphere at a faster rate.

Additionally, insect resistant Bt GE poplars would be disastrous to forest ecosystems in which insects are an integral part. The Bt toxin is present in every cell of the GE poplar, including the pollen. It is dangerous when inhaled and can travel up the food chain from the target caterpillars to harm beneficial insects and even insectivorous birds.

Continued reliance on extreme energy – Industrial scale biofuels and biomass fail to address the root causes of climate change and cause direct and indirect deforestation and land use change and impact food prices.

GLOBAL JUSTICE ECOLOGY PROJECT

266 Elmwood Avenue, Suite 307
Buffalo, NY 14222
716.931.5833

globaljusticeecology.org
climate-connections.org

email: info@globaljusticeecology.org



FOR MORE INFORMATION

<http://nogetrees.org>
<http://stopgetrees.org>