

SENATE BILL REPORT

HJM 4014

As Reported by Senate Committee On:
Agriculture, Water, Natural Resources & Parks, February 22, 2018

Brief Description: Supporting the continued research, development, production, and application of biochar from our forests and agricultural lands.

Sponsors: Representatives Shea, Fitzgibbon, Wilcox, Tharinger, Dent, Doglio, Buys, Fey, Manweller, Peterson, Maycumber, Ryu, Nealey, Pettigrew, Johnson, Springer, Haler, Lytton, Stokesbary, Smith, Gregerson, Muri, McBride, Kloba and Goodman.

Brief History: Passed House: 2/08/18, 97-0.

Committee Activity: Agriculture, Water, Natural Resources & Parks: 2/20/18, 2/22/18 [DP].

Brief Summary of Joint Memorial

- Affirms the Legislature's support for biochar research, including research into the production of biochar and research into applications for biochar.

SENATE COMMITTEE ON AGRICULTURE, WATER, NATURAL RESOURCES & PARKS

Majority Report: Do pass.

Signed by Senators Van De Wege, Chair; McCoy, Vice Chair; Warnick, Ranking Member; Honeyford and Nelson.

Staff: Karen Epps (786-7424)

Background: Biochar is a charcoal left behind after pyrolysis of residues from forestry and agriculture such as wood, straw, and manure used in alternative fuel production. Pyrolysis is the high temperature processing of organic materials in the absence of oxygen. Biofuel researchers initially regarded biochar as a waste product of pyrolysis. Biochar is so slow to decompose that scientists consider it to be a long-term repository for stored carbon.

Researchers have identified some potential uses for biochar in addition to carbon storage. Biochar is similar to activated charcoal and has been used successfully to treat sewage and waste water. It is also well suited for restoring degraded soils, such as those found near

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mining sites, because it tightly binds toxic heavy metals and neutralizes unnaturally acidic soils. Biochars applied to wet soils like those found in rice paddies decrease methane and nitrous oxide production. Because biochar remains virtually intact for centuries, it can permanently change a soil's character. Biochar improves aeration of poorly drained or compacted soils, while increasing the water-holding capacity of fast-draining, sandy soils. The porous nature of biochar also provides a physical home for bacteria and fungi.

Biochar is an emerging industry in Washington State. The Department of Ecology and Washington State University have engaged in a series of reviews to describe existing technologies to create clean, non-polluting pyrolysis units for producing energy, fuels, and other by-products. These reviews summarize the analytical techniques needed to characterize bio-oils and biochars and the permits needed to implement a biomass pyrolysis industry in Washington State. Currently there are 15 businesses in Washington and 32 businesses in adjoining states and provinces that either produce biochar or produce equipment for making biochar.

Summary of Joint Memorial: The House Joint Memorial recognizes that several potential markets exist for the product, including as agricultural soil amendments, reforestation treatments, pollution remediation, animal feed, and landscaping material. The House Joint Memorial further recognizes that biochar provides a potential economic use for woody biomass that can help offset forest fuel reduction project costs, which means more acres can be treated, and that removing excess forest biomass for use as a feedstock for biochar can minimize the severity of wildfires. Additionally, the House Joint Memorial recognizes that biochar can increase the economic value and productivity of Washington soils and benefit Washington farmers by reducing expenditures for irrigation and fertilizer while increasing soil pH and yields.

The Legislature affirms its support for the research efforts of the United States Forest Service, the Agricultural Research Service of the United States Department of Agriculture, Washington State University, the Washington State Department of Ecology, and other institutions. These efforts include research to produce biochar from the removal of wildfire fuel loads, from waste agricultural products, and from other waste biomass destined for landfills or combustion. The House Joint Memorial also affirms the Legislature's support for the research of biochar as an animal feed, remediation tool, landscaping material, and soil amendment for forest and agricultural lands.

Appropriation: None.

Fiscal Note: Not requested.

Creates Committee/Commission/Task Force that includes Legislative members: No.

Staff Summary of Public Testimony: PRO: This joint memorial seeks to educate the public on the uses of biochar. Biochar is a carbon-rich charcoal produced by heating biomass. Biochar can be used as a soil amendment as it holds more water, can increase crop yields significantly, and can reduce fertilizer leaching. Adding biochar to soil could increase agricultural productivity for generations, while also creating carbon sequestration. Biochar

has the potential to offer environmental benefits while also increasing economic development in rural areas. This memorial will help accelerate research and the growth of this industry.

Persons Testifying: PRO: Representative Matt Shea, Prime Sponsor; Greg Rock, Carbon Washington.

Persons Signed In To Testify But Not Testifying: No one.