

SENATE BILL REPORT

SJM 8005

As of February 13, 2019

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

Sponsors: Senators Short, Van De Wege, Warnick, Palumbo, Brown, McCoy, Braun, Lias, Schoesler, Hunt, Wilson, C., Wilson, L., Rolfes, Das and Rivers.

Brief History:

Committee Activity: Agriculture, Water, Natural Resources & Parks: 2/12/19.

Brief Summary of Joint Memorial

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

SENATE COMMITTEE ON AGRICULTURE, WATER, NATURAL RESOURCES & PARKS

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 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.

This analysis was prepared by non-partisan legislative staff for the use of legislative members in their deliberations. This analysis is not a part of the legislation nor does it constitute a statement of legislative intent.

Biochar is an emerging industry in Washington State. The Department of Ecology (DOE) 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.

Summary of Joint Memorial: The Senate Joint Memorial recognizes several potential markets exist for the product, including as agricultural soil amendments, reforestation treatments, pollution remediation, animal feed, and landscaping material. The Senate Joint Memorial further recognizes 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 removing excess forest biomass for use as a feedstock for biochar can minimize the severity of wildfires. Additionally, the Senate Joint Memorial recognizes 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 DOE, 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 Senate 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: Biochar is one of those hidden gems that is going to be a tremendous opportunity for soil additives and the like. This memorial encourages the continued development in research into biochar and its potential uses. This memorial is an important educational effort around biochar. There is more recognition that biochar has potential. As an example, there is a reduction of methane emissions if biochar is added to newer compost piles. Another use for biochar is as feed for cows, which reduces their flatulence and they gain weight much quicker.

Persons Testifying: PRO: Senator Shelly Short, Prime Sponsor; Greg Rock, Carbon Washington.

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