



SENATE JOINT RESOLUTION 17-002

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CONCERNING THE COLORADO GENERAL ASSEMBLY'S SUPPORT FOR THE CONTINUED RESEARCH, DEVELOPMENT, AND APPLICATION OF BIOCHAR FROM OUR FORESTS.

WHEREAS, Biochar is a solid material obtained when organic matter is heated in an oxygen-limited environment; and

WHEREAS, Biochar production is modeled after "terra preta", Portuguese for "dark earth", a process used thousands of years ago in Brazil's Amazon basin, where indigenous people created islands of rich, fertile soils that continue to hold carbon today and remain nutrient rich; and

WHEREAS, Biochar has been used as a reforestation tool by the United States Forest Service (USFS) in our national forests; and

WHEREAS, Treatments to thin forests, decrease fuel loads, and clear out insect- and disease-killed trees can be expensive because there are

currently few markets for small roundwood and virtually no markets for residual material, such as tops and limbs, and many timber sales are judged by potential bidders to be economically infeasible; and

WHEREAS, Biochar provides a potential economic use of woody biomass that can help offset fuel reduction project costs, which means more acres can be treated; and

WHEREAS, Removing excess forest biomass for use as a resource for biochar can minimize the number and severity of wildfires and thereby save both dollars and lives; and

WHEREAS, Biochar stores carbon in the ground that may otherwise be released into the atmosphere from wildfires; and

WHEREAS, Biochar can be produced from whole trees, such as the lodgepole and ponderosa pine found in Colorado forests, and can also be made from residual materials and insect- and disease-killed trees; and

WHEREAS, The USFS has been researching the use of biochar as a soil amendment, including ongoing research on soil test plots by station scientists at the Rocky Mountain Research Station in Fort Collins, Colorado, and has found that several potential applications and markets exist for biochar, including use for reforestation treatments; and

WHEREAS, The Agricultural Research Service of the United States Department of Agriculture (ARS) also conducts research on the use and application of biochar as a soil amendment; and

WHEREAS, USFS studies have found that biochar in soils attracts and holds water, increases ion exchange capacity, makes soil more porous, and enhances absorption of organic compounds, all of which enhance soil productivity and facilitate plant growth to reduce erosion and restore compacted, oxidized, and degraded soils, such as those that exist after devastating wildfires; and

WHEREAS, The ARS has found that the addition of biochar to soils may increase soil carbon, soil nutrient content, and plant productivity and that the quality of biochar is important to achieve these results; and

WHEREAS, Biochar also can be used in filters, such as those used in water treatment facilities, and well-established markets exist for activated carbon; and

WHEREAS, Energy, in electrical, thermal, and liquid fuel forms, can be an important co-product of biochar production from forest residues; and

WHEREAS, Biochar as a raw material can be further processed into an engineered biocarbon that will be valuable in production agriculture and forestry as well as in turf, nursery, and environmental applications; and

WHEREAS, Biochar can reduce the cost and increase the nutritional value of food; and

WHEREAS, Colorado is a national leader in the advancement of biochar research and development; and

WHEREAS, Biochar can increase the economic value and productivity of Colorado soils and benefit Colorado farmers by reducing expenditures for fertilizer and irrigation; and

WHEREAS, Biochar can enhance rural economic development and employment, in both the production and placement of biochar (i.e. "Forests to Farms" programs); now, therefore,

Be It Resolved by the Senate of the Seventy-first General Assembly of the State of Colorado, the House of Representatives concurring herein:

That we, the members of the Colorado general assembly, support the United States Forest Service, the Agricultural Research Service of the United States Department of Agriculture, and other research into the removal of fuel loads on the forest floor for the creation of biochar and the use of biochar as a soil amendment for reforestation, the continued creation of biochar from woody biomass found in our forests, and the use of biochar as a soil amendment within our forests and farms, towns, and cities to assist with reforestation treatments.

Be It Further Resolved, That copies of this Joint Resolution be sent to

Governor John Hickenlooper, the Rocky Mountain Research Station of the United States Forest Service, State Forester Mike Lester, Action Region 2 Regional Forester Jacque Buchanan, United States Forest Service Deputy Chief for State and Private Forestry Jim Hubbard, Commissioner of Agriculture Don Brown, Agricultural Research Service Plains Area Director Laurence Chandler, and each member of Colorado's Congressional Delegation.

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