

**First Regular Session  
Seventy-first General Assembly  
STATE OF COLORADO**

**RESOLUTION A**

LLS NO. R17-0114.01 Ashley Zimmerman x2291

**SENATE Joint Resolution**

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**COMMITTEE JOINT RESOLUTION**

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

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

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

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

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.  
*Capital letters indicate new material to be added to existing statute.*  
*Dashes through the words indicate deletions from existing statute.*

1           WHEREAS, Treatments to thin forests, decrease fuel loads, and  
2 clear out insect- and disease-killed trees can be expensive because there  
3 are currently few markets for small roundwood and virtually no markets  
4 for residual material, such as tops and limbs, and many timber sales are  
5 judged by potential bidders to be economically infeasible; and

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

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

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

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

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

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

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

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

1 results; and

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

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

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

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

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

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

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

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

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

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

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