The Honorable Debbie Stabenow
Chair
Senate Agriculture Committee

The Honorable John Boozman
Ranking Member
Senate Agriculture Committee

March 30, 2023

Dear Chairwoman Stabenow and Ranking Member Boozman,

95% of food is grown in the uppermost layer of soil, making topsoil one of the most important components of our food system. Conventional farming practices of intensive tilling, lack of cover crops, synthetic fertilizers and pesticide use has left farmland stripped of the nutrients, minerals and microbes that support healthy plant life. Topsoil on U.S. croplands erode 10 times faster than it can be replenished, costing Midwest farmers $560 Billion annually in fertilizers and shrinking yields.

If we continue the status quo of conventional farming practices and ignoring soil health, the U.S. could run out of topsoil in 60 years.[1] Without topsoil, the nation's ability to filter water, absorb carbon, and feed people drops precipitously.

The 2023 Farm Bill presents a historic opportunity to address soil and climate national security issues through strategic changes to existing Farm Bill programs that improve economic and environmental outcomes for American farmers, ranchers and forest landowners.

The Role of Biochar

Biochar is "the solid material obtained from the thermochemical conversion of biomass in an oxygen-limited environment."[2] In addition to biochar's many agronomic, environmental, electrochemical, and structural benefits, it is a carbon dioxide removal ("CDR") taskmaster. One ton of high temperature[3] biochar placed into a durable sequestration permanently removes three tons of CO2 from the atmosphere, fixing the CO2 stored in biomass and taking it out of the carbon cycle for millennia.

Biochar Is One of The Most Powerful Negative Emissions Technologies Available

Biochar is uniquely positioned, as "one of only a few permanent carbon removal technologies, and the one at highest technology readiness level"[4] to meet the "massive incoming demand for carbon removal."[5] Proven, immediately scalable, with unmatched removal potential and

[1] UN's Food and Agriculture Organization
[2] International Biochar Initiative
[3] 700C and above
[4] O. Mašek et al., Nature, 2019
[5] *Biochar & Carbon Credits: 2021 — The year of biochar*, Pro-Natura International

unparalleled climate, social, environmental, and financial co-benefits, biochar is our most valuable carbon removal tool. By 2100, a well-funded, scaled biochar industry could permanently remove 477 Gigatons of CO2. In the same turn, it is also the most underfunded, undervalued, underutilized and unseen. It is time for that to change if we are going to get serious about climate.

Where We Are

Current CDR capacity stands at 0.026% of our target. By 2050, that 0.026% must grow by a factor of one million to the size of oil & gas industry.[6] There is no precedent for the scale or speed of the necessary transition: at no time in history has an industry this size been built in just three decades. However, growth on this timeline is "a necessity, not an option,"[7] and a tremendous opportunity for American farmers, foresters, and rural communities to prosper.

Climate's Cinderella

Long overlooked by policy makers, investors, and end markets, the biochar industry has remained fragmented and small scale with 70% of producers generating 50 tons per year or less. The industry currently produces a mere 1% of its projected production capacity. To reach IPCC's target of 10 Gigatons CDR annually the biochar industry needs to grow from its current global estimate of 520,000 tons a year to 3 billion tons a year, and a further 6 billion tons a year 2050 and after.

Paying Climate & Financial Dividends

When applied to soils for regenerative agriculture, soil health, landscape restoration, and biodiversity preservation, biochar amplifies its CDR impact by activating and strengthening natural CDR systems[8] that pay CDR and other climate[9] dividends long after the initial biochar CDR application has been made.

Moreover, biochar has immense potential to stimulate innovation and growth of the bioeconomy. In addition to its CDR and agronomic benefits, biochar reduces the carbon intensity and enhances the performance of hard to abate products like construction materials, cement, and plastics and dozens upon dozens more.

Leveraging the CDR, social impact, and climate dividends[10] of biochar to achieve climate, sustainable development, and economic prosperity goals should be on every policy maker's agenda.

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[6] Swiss Re

[7] Swiss Re

[8] Biochar increases soil health, plant productivity and nutrient density; helps soils receive and hold water; facilitates reforestation and healthy forest management; aids in restoring degraded landscapes and strengthening ecosystem services; and regenerates the habitats that support terrestrial biodiversity.

[9] Additional biochar CDR climate returns include advancing climate adaptation measures and multiple U.N. Sustainable Development Goals through creation of climate resilient landscapes and agriculture, climate smart job and income creation, & providing food, water and climate security.

[10] Biochar improves soil structure & health, (soil organic matter, soil carbon content, microbial & fungi activity, cation exchange, pH, etc), soil's capacity to hold & draw down carbon and water; reduces NO2, CH4 and CO2 soil fluxes; increases crop productivity 20%-200%; increases farmer income up to 120%; reduces reliance on fossil based fertilizer; activates soil, forest,

Carbon Negative Bioenergy with Biochar Carbon Capture & Removal
"Converting biomass into fuels with simultaneous capture of the process CO2 emissions holds the greatest potential for negative emissions."[11] To reach Net Zero Goals, the International Renewable Energy Agency has set a target for Bioenergy with Carbon Capture and Storage ("BECCS") growth of 14% a year through 2030. Bioenergy is expected to provide 28% of the renewable energy mix, 40% of transportation fuels, and annual BECCS project deployments in the U.S. are projected to reach 1 Gigaton CDR a year in 2050. And yet the U.S. currently uses biomass and biomass wastes for a mere 3% of energy demand.

Biochar with Bioenergy: Climate Hero Waiting for Its Call to Action
Integrating carbon negative bioenergy production with biochar CDR and biochar application to soils to support soil health, climate smart agriculture, and ecosystem conservation creates a pathway to removing 66 Gigatons a year by 2050, avoiding and displacing billions of tons CO2 from biomass waste recycling, fossil fuel displacement, and creating billions of dollars in economic impact and opportunity for rural communities.

Soils made healthier by biochar could generate $50 billion in social & environmental impacts annually and $37M in on-farm economic value. **"**Good soil is gold for businesses**"** and will require $700B capital expenditure over next 30 years generating $10 Trillion in net financial return.[12]

There is no more powerful climate solution available to us. It is time that all key stakeholders and decision makers in the climate change, agriculture, biodiversity, finance, adaptation, and resiliency ecosystems recognize the value of this carbon triple threat and step up to rapidly deploy it. We have no time to lose. The call to action starts now.

Answering the Call: Farm Bill 2023 Recommendations for Action
The 2023 Farm Bill offers an unprecedented opportunity at a crucial moment in time to authorize and implement strategic changes at USDA to enable more farmers and forest landowners to engage in conservation, adopt climate smart practices, implement climate resilience solutions, and climate proof their livelihoods by utilizing existing core Farm Bill programs. This letter outlines priority actions.

grassland & nature-based carbon sinks; protects biodiversity from habitat encroachment; enhances natural ecosystem services; increases crop nutrient density; facilitates climate resilient agriculture, landscape restoration, reforestation, & afforestation; supports healthy forest management; reduces wildfire risk; stimulates rural economies.

[11] Getting to Neutral

[12] *Forbes*

TITLE I — COMMODITY PROGRAMS

ECONOMIC POLICY & ANALYSIS REQUESTS	
Create a Biochar & Biocarbon Economic Policy & Analysis Group ("BBEA")	• Serve as USDA's primary analytical resource for formulating and evaluating program policies, determinations, and alternatives for biochar and biocarbons: o produced from different biomass and biomass wastes o using commercially available and emerging pyrolysis, gasification and other thermal conversion technologies operated at a range of temperatures, residence times, and other process conditions o for use in a range of agricultural, conservation, restoration, remediation, carbon removal, advanced manufacturing, and built environment end markets. • Provide detailed summaries of impacts on supply, demand, price, income, regional economies, GHG emission reductions, carbon removal capacity building, and sectoral climate risks.
Create a Climate & Biodiversity Economic Policy & Analysis Group ("**CBEA**")	• Serve as USDA's primary analytical resource for formulating and evaluating program policies, determinations, and alternatives for measuring the economic impact, including financial valuation of the benefits accrued to society for: o Implementation of each Eligible Conservation Practices in CRP, Conservation Codes in EQUIP, and similar programs, o for a range of agricultural, conservation, restoration, remediation, carbon removal, hydrological practices. • CBEA shall analyze emerging and best practices for financially valuing natural landscapes and ecosystem services for the purposes of developing a valuation

	model to be used by USDA and other Agencies for assessing the financial and societal value of restoration and conservation for calculating payments, incentives, and performing cost-benefit analysis of Agency actions or failures to act relating to programs and policies impacting natural landscapes and ecosystems. • CBEA shall assist USDA in establishing a hierarchy of eligible practices and impact payments based on their value to society as well as economic impact. • CBEA shall prepare detailed reports to USDA, EPA, the White House Council of Economic Advisors, and the Congressional Budget Office.

DISASTER ASSISTANCE & INSURANCE PROGRAMS REQUESTS	
Add Degraded Soil Health as an Eligible Disaster Under the Emergency Disaster Program	• Add Degraded Soil Health to the list of Eligible Natural Disasters. • Direct a newly created U.S. Soil Quality Monitor Program, modeled after the U.S. Drought Monitor Program, to assist the Secretary in establishing definitions and severity ratings for the program. • Provide Fast Track Secretarial disaster designations for Severely Degraded Soils when any portion of a county meets a designated range of Severe Soil Degradation Values to be set by the new U.S. Soil Quality Monitor Program.
New U.S. Soil Quality Monitor	• Create a U.S. Soil Quality Monitor program based on actual soil sampling, digital in situ monitoring, and state of the art developments in GIS and AI, to be updated in real time and publicly available via a website.
Livestock Forage Disaster Program	• Reauthorize and add a set aside in program assistance payments to be used specifically for the incorporation of biochar into the soils of the drought-stricken forage

	areas to increase forage drought resilience in future years and financial losses associated with future droughts. • Reduce subsequent fiscal year assistance payments by 20% for those producers who opt to forgo incorporating biochar into the affected forage areas using the biochar set aside in the year prior.
Noninsured Crop Assistance	• Reauthorize and reduce benefits for eligible crops for any year that biochar was not amended into soils within the 5 years prior, or pursuant to timing guidelines informed by the New Biochar Research Network. • Increase service fees for eligible crops that did not adopt climate resiliency measures such as biochar by 50% per crop per county or per producer per county.
Agriculture Risk Coverage	• Reauthorize and tie eligibility, amount, and duration of payments to proof of risk mitigation through adoption of climate resilience measures such as addition of biochar to soils. • Reduce premiums for producers that incorporate biochar into soils to mitigate drought, flood, soil health, disease risks.
Emergency Forest Restoration Program	• Add the following Eligible Forest Restoration Practices: ○ "Application of appropriate rates and types of biochar to soils to replenish soil health, improve new planting success, create water & health resilience of replanted forest stand." ○ "Debris removal, processing, and recycling into biochar, compost, or other beneficial products, such as down or damaged trees, in order to establish a new stand or provide for natural regeneration."

Tree Assistance Program	• Amend the payment calculation for tree, bush, or vine replacement, replanting and/or rehabilitation, to include 100% of the cost of biochar needed to prepare soils to support long term success of replanting & rehabilitation.
Drought Program	• Authorize Secretary to make grants and the CCC to make payments for implementation of drought resilience measures on acreage claimed as a loss under any of the Agency's assistance programs. • Drought resilience measures shall include amending soils with biochar to increase water holding capacity of soils, among others.

REVOLVING FUNDS REQUESTS
• Create a Revolving Funds for Financing**:** o Water and Wastewater Projects That Employ Biomass Waste Based Carbon Filtration and Nature Based Systems o Use of Biochar in Agricultural, Soil Health, Landscape[13] Restoration, Remediation, Water Quality including Agricultural Nutrient and PFAS Removal, and Decarbonization of Agricultural, Forest, and Industrial Products

TITLE II – CONSERVATION

SUBTITLE A - CONSERVATION RESERVE PROGRAM (CRP) REQUESTS	
Increase Cap on Acres Under Enrollment	• Increase maximum enrolled acreage to 35 million acres for FY 2024-2026 and 40 million acres FY 2027-2029.

[13] Landscapes include forests, grassland, cropland, abandoned cropland, wetlands, peatlands, foraging lands, marginal lands, wildlife habitat, and migratory corridors.

Implement Forward Looking Enrollment Targets	• Instead of using state historic enrollment rates as the basis for determining specific landscape program enrollment targets under the program, tie annual enrollment rate goals to timely achievement of U.S. conservation and climate targets[14]. • Rapid growth of natural systems conservation like that provided for under this program is critical to the country's ability to meet Net Zero timelines, pre-empt staggering economic losses, and prevent human suffering associated with increasing temperatures. • Growth is achieved by looking forward, not by looking backward toward past enrollment rates.
Remove Perverse Incentives to Do Less from Rental Rate Caps	• Incorporate ability to account for the value created by conservation measures on individual eligible lands when determining rental rates instead of capping rental rates at an area or category average. The average should serve as a base line. • Capping rates creates a perverse incentive for program participants to do the bare minimum. • To meet food, water, biodiversity, and climate security goals, the U.S. must incentivize participants to optimize high impact conservation measures. • Calibrating rental payments to impact for all land categories, not just areas of special environmental concern, can help move the dial on the U.S. achieving carbon emission reduction, removal and other climate goals.
New Climate Smart Agriculture Standards Board	• Create and fund an oversight body within USDA to set science-based standards for climate smart agricultural standards to be adopted throughout USDA programs. • Standards shall be informed by LCAs, economic impact of climate, biodiversity, food security, drought, and water

[14] Such as national agriculture, land use, land change and agriculture sector carbon emission reduction goals; ground water recharge rates; biodiversity protection through ecosystem restoration goals.

	scarcity risks, and opportunities for yield improvement and increased income of agricultural practices.

Revise "Agricultural Commodity" Definition § 1410.2(i)	• Refine or direct the Secretary to refine the current definition "any crop planted and produced by annual tilling of the soil or on an annual basis by one-trip planters" to reflect the science-based climate targets need to transition the business of agricultural production to less carbon intensive agricultural practices. • Specifically, direct the Secretary to transition "tilling" out of the definition to encourage more rapid and widespread adoption by producers of biodiverse, climate smart crops.
Revise "Cropland" Definition 7 CFR 718.2(a)(1)	• Refine or direct the Secretary to refine the current definition of "Cropland" away from the requirement of tilling to align the business of agricultural production to less carbon intensive agricultural practices as required by science-based climate targets. • Specifically, direct the Secretary to transition "tilling" out of the definition to encourage more rapid and widespread adoption by producers of biodiverse, climate mart crops.
Amend Prevented Planting and Failed Acreage Credit Requirements to include biochar 7 CFR 718.103(d)	• Amend or direct the Secretary to amend the credit requirement for situations of drought to read as follows: "Prevented planted acreage credit will not be given to crops where the prevented-planted acreage was affected by drought, unless*:"(4) producer demonstrates biochar was used in field preparation in amounts designed to improve the moisture holding capacity and soil organic matter of the field's particular soil type."*
Update Field Office Technical Guides to include biochar guidance	• Direct the Secretary to update Field Office Technical Guides containing official USDA guidelines, criteria, and standards for planning and applying conservation treatments and conservation management systems, including detailed information on the conservation of soil,

	water, air, plant, animal resources, and cultural resources applicable to the local area for which it is prepared with guidance on using biochar in all appropriate activities where it may enhance conservation outcomes.
Amend 7 CFR 1410.63(e) to clarify producer has the ability to sell carbon and other credits	• Amend or direct the Secretary to amend the following provision to unequivocally clarify the ability of producers to sell carbon and other environmental credits. *"The sale of carbon, water quality, or environmental credits ~~may~~ ~~be~~ **are** permitted by CCC."*
CRP Contract Obligations	• Include application of biochar at specified rates in the CRP contract and conservation plan.
CRP Eligible Practices	• Add a biochar application as a stand-alone Eligible CRP • Add biochar application as a component of existing Eligible CRPs.
Extend CCC Cost Share Payments to removal of biomass waste from tree stands. 7 CFR 1410.40(f)	• Direct CCC to extend cost-share payments for thinning of existing tree stands to benefit wildlife habitat and other resource conditions on enrolled land to include removal of biomass waste generated thereby for the purpose of beneficial recycling into energy, biochar, or other bioproducts. • Leaving biomass waste behind, as is the current practice due to economic infeasibility of removal without payment, contributes significantly to CO2 emissions. CCC payments for removal will have a major impact on CO2 reduction, habitat health, and stimulating economic development.
State Technical Committee Coordination	• Adopt education, information management and sharing, policy priority, and feedback management best practices to ensure that all State Technical Committees are fully educated on how to rapidly and effectively deploy programs and tools.

	• We've worked with State Technical Committees that received policy directives from USDA to deploy conservation practices like using biochar to improve soil health and water quality of wildlife habitats who did not take action due to lack of knowledge about how to use biochar.

Revise Soil Health Income Protection Pilot Program	• The pilot program as written fails to:
	  ○ Employ science based best practices for improvement of soil health;
	  ○ Properly economically value soil health and remediation;
	  ○ Select and pay for solutions based on greatest soil health impact;
	  ○ Acknowledge additional value created by payments for soil health interventions that include improved ecosystem services, reduction of CO2 and N2O emissions, risk mitigation of planting failure, reduction in use of disaster assistance programs and crop insurance programs, increased agricultural producer income, increased food and water security.
	• This program should be entirely revamped to address these failures. "Good soil is gold" (*Forbes 2022)* and this should be one of the most important, well-funded, well implemented programs USDA administers.

Conservation Stewardship Program	• Funding: Increase funding for FY2024-2029 to $1.2 billion; $1.2 billion; $1.3 billion; $1.3 billion. • Review and enhance 2018 Farm Bill administrative reforms to improve coordination with EQIP, Forest Service, and Fish & Wildlife to enhance deliverability of the program, and help producers address priority resource concerns.

	• Add use of biochar as a practice supported by the program and to the practices supported by the program
Regional Conservation Partnership Program (RCPP)	• Funding: Increase mandatory funding to $500 million a year. • Prioritize use of biochar, biocarbons, and nature-based treatment solutions in conservation projects to address water quality and quantity issues.
Environmental Quality Incentives Program	• Funding: Increase funding for FY2024-2029 to $2.1 billion. • Include biochar application in water conservation, watershed-wide projects and agricultural production.

TITLE IV – NUTRITION

BACKGROUND	
Building upon the success of the Food Insecurity and Nutrition Incentive (FINI) program and to enhance its impact on food insecurity and nutritional health.	
REQUESTS	
Increasing Nutrient Contents of Commodities, Fruits, and Vegetables: Pilot Program	• Establish a Pilot Program to study and measure the increase in nutrient contents and production yields of commodities, fruits and vegetables produced using biochar as nutrient carrier for soils and plants as compared to the use of synthetic fertilizers for soil and plant nutrition. • Pilots shall be carried out in a manner that obtains data from commodities, fruits, and vegetables grown with biochar in urban, rural, disadvantaged communities in all temperate and agricultural zones of the U.S. • Create a Scientific, Technical, Health & Economic Expert Committee to work with USDA Policy and Economics Analysts to analyze and report on the cost-benefit of using biochar in lieu of synthetic fertilizers to

	achieve improved nutrient content and increased food crop yields, factoring the impacts on human nutrition and health, as well as economic, social, water conservation, food security, climate resilience, drought tolerance, nutrient cycle management, carbon dioxide and nitrous oxides reductions, soil health, and water quality. • Committee reports shall be made to the Secretary, National Institutes of Health, Department of Health and Human Services Office of Disease Prevention and Health Promotion, and other agencies with relevant jurisdiction.

TITLE VI – RURAL DEVELOPMENT

REQUESTS	
Technical Assistance and Construction Grants for Innovative Regional, Urban & Rural Wastewater Treatment Solutions That Incorporate Biocarbon & Nature Based Treatment Systems	• Establish a program for providing grants and technical assistance for the study, design, or construction of regional wastewater systems that incorporate nature-based treatment solutions including biochar and biomass waste-based filtration, constructed wetlands, and related features for historically impoverished communities that have had difficulty installing traditional wastewater treatment systems due to soil conditions.
Watershed Protection and Flood Prevention Program	• Funding: Increase funding to $100 million in mandatory funding annually for 10 years for watershed and flood prevention activities. • Prioritize nature-based treatment solutions including biochar and biomass waste-based filtration, constructed wetlands, and related features.

TITLE VII – RESEARCH

REQUESTS	
Adopt the Biochar Research Network Act of 2023	• Direct the Secretary to establish a national biochar research network of up to 20 research stations or facilities to test the full range of biochar types across soil types, soil conditions, application methods, and climatic and agronomic regions; and establish an NRCS practice standard informed by the research. • Allocate $50 million in mandatory funding each year FY 2024-2029
Biomass Research and Development Initiative	• Reauthorize and increase mandatory funding by 75% over 5 years
Foundation for Food and Agriculture Research	• Double mandatory funding to $350 million over 5 years

TITLE VIII – FORESTRY

BACKGROUND
Each ton of forest waste left in the environment to decay emits 6.7 tons of CO2. Leaving waste from forest management, timber operations, tree kills, or disasters is a significant contributor to U.S. carbon emissions and global climate change. Only 40% of a tree felled for timber is used, the remaining 60% is left behind. In private and public forests across the U.S., millions of tons of waste are left behind each year because it is not economically viable for owners or businesses to remove it for recycling without a financial incentive or developed end markets in place. Leaving this waste in the forest also forgoes an important opportunity to generate carbon negative hydrogen, methanol, ammonia, SAF, and baseload electricity to speed the zero emissions energy transition, reduce fossil fuel based emissions, permanently remove carbon from the atmosphere through production of biochar; support regenerative agriculture and decarbonization of hard to abate products like cement and building materials; create rural jobs and local economic impact.

REQUESTS	
Forest Waste Carbon Management Program **Sub-Programs** • **New Carbon Negative Fuels Out of Forests Program** • **New Alien & Invasive Species Protection to Prosperity Program**	• To facilitate increased capacity for forest waste removals for the purpose of managing carbon emissions, producing transition fuels, and invigorating local economies, establish a program for providing grants and technical assistance for the study, design, procurement of equipment, and implementation of low carbon methods for collection and removal of forest waste from forests, including alien and invasive species cleared for forest management and climate adaptation, for use in innovative low carbon and carbon negative applications such as biochar, nanocarbons, among others. • Developing economical, low carbon methods and tools for accessing and removing forest waste for recycling into carbon negative bioenergy, biochar, and bioproducts: o Improves the health and climate resilience of forests; o Amplifies their climate, biodiversity, and ecosystem services benefits like production and storage of fresh water; o Allows for new growth and healthy maintenance that can lower local temperatures critical to agriculture in the area; o Reduces wildfire risk; o Promotes biodiversity which plays a key role in the U.S. economy.
Community Wood Energy Program	• Reauthorize and increase mandatory funding by 50%.
Timber and Forest Waste Innovation Program	• Reauthorize and set aside funding specifically for forest waste to innovation program
State and Private Forest Landscape-Scale Restoration Program	• Reauthorize and increase funding by 60%.
Collaborative Forest Landscape Restoration Program	• Extend authority for program and increase funding to $130 million annually over 5 years.

TITLE IX– ENERGY

REQUESTS	
Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants	• Increase mandatory funding baseline to $250 million annually. • Increase Grants for Renewable Energy Systems cap level from $1 million to $5 million. • Reduce applicant grant cost share to 40% of eligible costs. • Reduce loan guarantee fee to 0.25% for Renewable Energy Systems recycling wastes, generating carbon negative or ultra-low carbon energy, and producing valuable co-products for use in agriculture, soil health, water quality, erosion control, ecosystem restoration or hard to abate product decarbonization to incentivize energy projects that optimize the climate impact of each dollar lent. • Prioritize carbon negative energy generation in application scoring.
Biobased Markets Program	• Reauthorize and increase mandatory funding to $5 million per year over 5 years.

TITLE X – HORTICULTURE

REQUESTS	
Local Agriculture Market Program	• Extend authority and double mandatory funding to $100 million a year over 5 years. • Allocate $15 million of the annual mandatory funding to a new Benefits of Using Biochar promotion initiative within program to build awareness and market adoption by agricultural producers, farmer's markets, and local food producers.

New Pesticide Reduction & Remediation Study	• Provide $30 million to USDA to conduct a study on multiple crops and soil types on the potential for chemical pesticide reduction and contaminated soils remediation using biochar, wood vinegar, and other biomass waste products.

TITLE XI – CROP INSURANCE

REQUESTS	
Establish Biochar Use as Good Farming Practice	• Establish biochar use as a good farming practice for crop insurance purposes and allocate mandatory funding to educate agricultural producers, conservation program participants, FSA, loss adjusters and agents regarding the importance and risk reduction role of biochar use in conservation and agronomic practices.

TITLE XII – MISCELLANEOUS

SUBTITLE A: LIVESTOCK REQUESTS	
Animal Disease Prevention and Management	• Direct the National Animal Health Laboratory Network (NAHLN) to study the health benefits and disease prevention impacts of using biochar in feed, in bedding, as a supplement, as a preventative and acute disease treatment in livestock in a variety of livestock production environments and evaluate incorporation of biochar in the National Animal Disease Preparedness and Response Program. • Allocate $100 million a year over 5 years in mandatory funding.
SUBTITLE B: AGRICULTURE AND FOOD DEFENSE REQUESTS	
USDA Office of Homeland Security Strategic Response Plans	• Direct the USDA Office of Homeland Security to analyze the efficacy of biochar and wood vinegar applications in strategic response plans in light of biochar's unique properties including adsorption of

	toxins; precision delivery of nutrients, microbes, fungi, and treatments; stabilization of soil health. • Allocate 5% of the Office's annual budget to this endeavor.
National Plant Disease Recovery System Pilot	• Create a pilot program to evaluate impact, optimal role, deployment and plant response times of using biochar in plant disease recovery. • Provide $5 million in competitive grant funding.
SUBTITLE C: HISTORICALLY UNDERSERVED PRODUCERS REQUESTS	
New Climate Resilience & Carbon Planning Program	• Create a program for the provision of training, outreach, technical assistance, grants, and pilot programs for the pro-active adoption of climate resilient agricultural practices and strategic carbon management planning, including planning for strategic management of related climate sectors such as water scarcity, biodiversity, carbon negative and alternative crop selection, income diversification, soil health, and nutrient cycle management in historically underserved communities.
Farming Opportunities Training and Outreach	• Reauthorize with 50% more mandatory funding and direct the Secretary to include beneficial use of biomass waste, biochar production and application, climate smart agricultural practices, and climate resilience risk mitigation measures in training and outreach under this program.
Tribal Advisory Committee New Cross Agency Working Group	• Reauthorize USDA Tribal Advisory Committee and create a Cross Agency Working Group to advise the Secretary, select USDA offices and programs on tribal agricultural topics, with a special emphasis on collection of indigenous knowledge and cultural practices relating to healthy agricultural, grassland, wetland, forest, riparian, and wildlife habitat management and annually report recommendations to the Secretary.

New Biochar Access and Development Program	• Create a Biochar Access and Development Program to make competitive grants to promote growth of biochar production, agricultural use, and innovative uses in historically underserved communities industry. • Allocate $25 million annually over the course of 5 years.
Office of Urban Agriculture and Innovative Production	• Direct the Office and Director to encourage and promote use of biochar and other recycled biomass waste agricultural products in urban, indoor, and other emerging innovative agricultural production practices. • Provide authority to award competitive grants to operate community gardens, create small agricultural cooperatives, develop youth entrepreneurial projects, nonprofit farms, educate communities on food systems, nutrition, environmental impacts, and agricultural production, and help offset start-up costs for new and beginning farmers that incorporate use or production of biochar and other recycled biomass waste agricultural products. • Allocate $65 million annually in mandatory funding over 5 years.
Urban Agriculture and Innovative Production Advisory Committee	• Reauthorize the Committee and mandate that Committee composition include at least two qualified members from the Gen Z generation. • Increase scale and geographical distribution of pilot projects to increase biochar, compost, and climate smart practices and reduce food waste, biomass waste and create urban and suburban county committees.

SUBTITLE E – OTHER MISCELLANEOUS PROVISIONS

REQUESTS

Authorize Creation of an Under Secretary for Climate Resilient Agriculture, Climate Resilient Communities & Integrated Landscapes Carbon Management	• The Under Secretary's role shall be to lead and manage development of policy, programs and best practices in climate resilient agriculture, climate resilience in rural and underserved communities, and integrated carbon management across natural landscapes and the Agencies with jurisdiction over them so that carbon reduction impact of U.S. policy, programs, and industries is coordinated for maximum impact.
Create Carbon Management Liaisons	• Each office, service, and major program within USDA shall have a Carbon Management Liaison whose role shall be to coordinate and exchange information with other offices, services, and major programs on climate and carbon management policy, knowledge, actions, impacts, data, know-how and other valuable information, tools, or skills. The purpose of the role shall be to ensure consistent, coordinated, and informed climate smart action by USDA at all levels across all sectors.
Precision Agriculture Task Force	• Reauthorize the task force and expand scope of work to include policy recommendations to promote the rapid deployment nanocarbon technologies for precision delivery of nutrients, treatments, and other agronomic benefits on agricultural lands.
Conservation Practice Data Base	• Include coverage of biochar as a conservation practice and biochar used in conservation practices as a data set in the Department's conservation practice impact data collection system. • Design public interfaces and allow public access to the data warehouse. • Direct the Risk Management Agency to work with other agencies to conduct research and analyze how yield variability and risk are impacted by biochar as a conservation practice and biochar used in conservation practices.

Biochar Research and Development Trust Fund	• Establish a biochar trust fund and direct the Secretary to make payments annually for each fiscal year through 2029 for the purpose of biochar research and extension activities, technical assistance, and development activities as well as to support dissemination and commercialization of relevant discoveries. Prioritizes payments for research priorities established through the National Biochar Research Network with consideration towards climate smart agriculture, carbon removal ecosystems, and other research and extension projects. Funds provided from the trust fund will not supplant funds made available to carry out other activities by the Department of Agriculture.

Sincerely,

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FORTITUDINE 42

Walk Your Climate Talk

Bold Climate Advisory
for Those Who Do

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