









be used when analyzing the effects of biochar soil amendment on crop yield, soil properties, and GHG emissions; 2) Unrealistically high biochar application rates used in lab experiments are likely impractical under field conditions because of the high cost of feedstock and its transportation and pyrolysis; 3) Long-term field experiments should be used to determine the legacy effects of biochar soil amendment on crop yield, soil properties, and GHG emissions; and 4) The costs associated with biochar production and its application to field sites, plus the potential impact of the chosen biochar product on crop yield, should always be considered and verified before deciding on biochar use as a soil amendment.

#### NOV. 2023 UPDATE

A 2023 article titled "[Effect of biochar application on corn and soybean yield in Michigan and Ohio](#)" by Silva-Pumarada et al. provides the following information about biochar addition to cropland.

- Pine-derived biochar was added to soils in the fall of 2020 at locations in Ohio and Michigan to test its effect on corn and soybean yields.
- Yield of both crops was unaffected by biochar additions.
- The authors concluded that 1) the positive environmental and soil quality benefits that may accrue from biochar soil amendment will not offset the short-term lack of its effect on corn and soybean yield because of the high cost of the biochar amendment and its application, and 2) biochar soil amendment may not be economically viable for corn and soybean farmers to use in the short-term.

**These results further reinforce the conclusions about biochar use on corn and soybean production sites that have been alluded to previously in this article—i.e., the expense associated with biochar application to corn and soybean production sites will not likely be recouped in the short-term by yield increases of either crop.**

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