

BEHAVIORAL FACTORS AFFECTING THE ADOPTION OF BIOCHAR OF FARMERS IN CANADA

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Biochar is a promising carbon-based soil amendment with ancient, South American roots. Despite its long history, research surrounding its use in modern agriculture has only just begun in North America. There are several studies examining biochar in soil, ranging from its effects on nutrient and water retention to the way it affects earthworms and other organisms. However, our understanding on the socioeconomic implications of using biochar as a soil amendment in temperate agriculture remains scarce. Our research aims to fill this gap through semi-structured interviews with farmers and the completion of an economic analysis based on market values of biochar feedstocks and the current projected findings of biochar's influence on crop yields. Our results showed that the most popular responses regarding biochar and a farmer's willingness to implement it on their farm included the cost and expected benefit when applied to land and the lack of research consensus regarding biochar's effects on soil health. Most participants were not familiar with biochar prior to being contacted about the study and were wary of new soil amendments, as many farmers are offered many different products meant to increase soil health that often do not work as advertised. Due to this caution, participants wanted more research showing the effects of biochar, especially research relevant to their climate, crop rotations, and soil types. All participants valued soil health as an important foundation to a successful farming operation, and our results showed that, with the correct information, they would invest in their soil to ensure their land continues to produce healthy food for their communities.