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Impact of Covid-19 in agri-food system and its environmental effects

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The Covid-19 pandemic caused negative impact to the economy due to closing various economic activities. However this closure had a positive impact on the environment due to less emission of pollutants. The environment became a discussion point as cities were shutting down for quarantine and unusual natural sights were observed due to clear sky. It is important to look at look at the potential environmental impacts of COVID-19. Its possible to use various industry shout down scenarios with the IMPLAN modeling to estimate the environmental impacts associated with COVID-19. The specific objective of this study was to analyze total environmental impact of the pandemic specific to agri-food sector in Tennessee. We used IMPLAN data which displays the U.S. economy with 546 sectors. A sector comprises firms with similar input patterns, and most sectors use the North American Industry Classification System (NAICS). The IMPLAN has environmental data with industry-specific coefficients of physical emissions per dollar of output. As manufacturing decreases by X among of dollars, the GHG emissions will decrease by Y amount of dollars. IMPLAN has a complete input-output structure for the selected economy, down to the county level. For this analysis we specifically used agri-food industries and grouped them into four sectors namely food production, food processing sectors, food manufacturing, food distribution sectors. We first analyzed the employment and revenue loss of each industry and the IMPLAN generated the associated environmental impact due to the change. The analysis showed positive environmental effects due to closing of agriculture businesses caused by the pandemic.