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Defining and Analyzing a Food Desert

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RESULTS AND DISCUSSION

The data presented in Table 1 compare straight-line and network analysis methods and categorizes the results based on the characteristics of the tracts. When performing the straight-line distance analysis, only Class 1 and Class 2 stores were used because this was replicating the methods used by the CCFPC. The results that were obtained from doing the straight-line analysis in this project showed that 101 census tracts were food deserts, out of the 446 census tracts in the county. In doing the network analysis, the results showed that 135 census tracts were food deserts; 34 more census tracts than the straight-line analysis. Simply changing the methodology of the distance calculation increased the number of Cuyahoga County food deserts by roughly one third. Since the network analysis seems to be a more appropriate method for urban settings, this method and its results were used throughout the rest of the project.

Network analysis was performed again, but this time adding food pantries, markets, and urban gardens. These features were added to the network analysis as a way to test whether the final output of food deserts would be provided with some relief from one or more of these food venues. This finding is one of the highlights of our analysis—food pantries and harvest locations are collectively providing food relief in nearly 70% of the county’s food desert neighborhoods.

CONCLUSION

In conclusion to this study, network analysis is a better way to map out areas that are food deserts. Network analysis uses streets to find the closest facility from a certain location. With this in mind, this is the most logical way to present data that will help the general population. Adding food pantries, markets, and urban gardens suggests that with the effort of providing these additional food venues, there is some food relief in desert areas. These data can also help in figuring out where more food venues need to be located in areas that still need food relief.

Although the results were not complete for the poverty rate and percent of households that have no vehicle, there is a reasonable cause to say that food deserts are located in areas that have a higher poverty rate and higher rate of homes that have no vehicle available.

FUTURE RESEARCH

Other characteristics of food desert areas are of interest for future research. These might include crime, and condition/availability of the sidewalks. These variables are thought to affect the availability of food venue options for where citizens shop. Other variables that might affect our findings are the seasons. Although it was found that there is food relief in markets and urban gardens, these food venues are on a seasonal basis. Additionally, there might be eligibility and/or timing issues relating to food pantry access. A focus on these issues would paint a clearer year-round picture of food access for Cuyahoga County neighborhoods.

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CITATIONS


Cuyahoga County Food Policy Coalition. (2011). Cuyahoga County Assessment: Access to Supermarkets. Cleveland, OH.


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