

A look at 377 metros—can local food product meet local household demand?

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Credit: Johnny Dod/public domain

Many U.S. cities have established goals to increase local food self-reliance, suggesting that metropolitan areas do not produce enough food to support local household demand. However, a new study from researchers with the Sustainable Healthy Cities Network at the University of Minnesota's Humphrey School of Public Affairs found this isn't the case for many metropolitan areas.

The study, published in *Environmental Science & Technology*, looked at the actual [food](#) production and consumption patterns within the borders of 377 [metropolitan areas](#) across the country. Researchers found one in five have enough milk and egg production inside its borders to meet residents' demands, evaluated on an annual basis. About one in ten can fully meet the fruits and vegetable needs of its residents.

"The issue is not that we lack agricultural production in and around cities, but that our present-day supply chains may not be matching

local production with local demand," said Peter Nixon, co-author of the study and a doctoral student in the Department of Bioproducts and Biosystems Engineering in the College of Science and Engineering and the College of Food, Agricultural and Natural Resource Sciences.

These statistics are noteworthy because the study found many metros have the capacity for local food production right now to fully meet both direct and indirect demand for four key items: milk, [eggs](#), fruit and vegetables. Indirect demand includes food used as ingredients in processed food (e.g., eggs used in bread, tomatoes used in pasta sauce, milk in cheese and butter).

Some self-sufficient metros are in locations with a high concentration of specific agricultural production such as apples grown in Washington State and oranges grown in Florida. Milk and eggs were seen to be more broadly produced around [urban areas](#) across the U.S. For the urban areas that aren't self sufficient, researchers found the median local capacity is about five percent for eggs and fruits, 18 percent for dairy and 23 percent for vegetables. This means most of these metros already producing enough of these foods to supply a significant portion of local demand, yet locally produced food may not be making it to local consumers.

"Indeed, the results suggest that we should think carefully about what specific purposes increasing local agriculture in and around cities will serve—is it to boost the local economy or to serve underserved communities?" said Professor Anu Ramaswami, co-author and advisor on the study. "Our dataset can help individual urban areas understand their own particular situation with regard to production-[demand](#) for food as a starting point for further food systems planning."

Moving forward, the research team plans to work with individual cities to help prioritize urban food

action planning to best meet their specific goals, context and stakeholders.

More information: Peter A. Nixon et al, Assessing Current Local Capacity for Agrifood Production To Meet Household Demand: Analyzing Select Food Commodities across 377 U.S. Metropolitan Areas, *Environmental Science & Technology* (2018). DOI: [10.1021/acs.est.7b06462](https://doi.org/10.1021/acs.est.7b06462)

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