MEASURING RACIAL EQUITY IN THE FOOD SYSTEM: ESTABLISHED AND SUGGESTED METRICS

MAY 2019



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Authors

Sarah Rodman-Alvarez, PhD, MPH Social Impact Consultant sarahrodmanalvarez.com

Kathryn Colasanti, MS

Specialist

Center for Regional Food Systems (CRFS),

Michigan State University

Suggested Citation

Rodman-Alvarez, S. & Colasanti, K. (2019)

Measuring Racial Equity in the Food System:

Established and Suggested Metrics. East

Lansing, Ml. Michigan State University Center
for Regional Food Systems. Retrieved from

http://foodsystems.msu.edu/resources/

measuring-racial-equity-in-the-food-system

For more information, please contact Kathryn Colasanti at colokat@msu.edu.

Photo Credits

Khalid Ibrahim: Cover center and right, page 17, page 22, and page 30

Steve Koss: Cover left, page 6, and page 7

Acknowledgements

Thank you to the following people for providing valuable insight and suggestions on the racial equity metrics list:

Patrice Brown, Detroit Eastern Market Winona Bynum, Detroit Food Policy Council

Elsadig Elsheikh, The Haas Institute for a Fair and Inclusive Society at University of California, Berkeley

Clare Fox, Los Angeles Food Policy Council

Breanna Hawkins, Los Angeles Food Policy Council

Zoe Hollomon, Community Economic Development Consultant

Mohammad Yusri Jamaluddin, Michigan State University Extension

Joann Lo. Food Chain Workers Alliance

Colleen McKinney, Center for Good Food Purchasing

Janee Moore, Michigan State Department of Health and Human Services

Teofilo Reyes, Restaurant Opportunities Center United

Thank you also to the members of the Michigan Good Food Shared Measurement Advisory Committee for reviewing an earlier draft of this report.

The authors would like to thank Andrea Weiss of CRFS for communications guidance and Blohm Creative Partners for copyediting and design.

Support for this work comes from the W.K. Kellogg Foundation.

MEASURING RACIAL EQUITY IN THE FOOD SYSTEM:

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Introduction

The U.S. food system has created and been shaped by racial injustices since its inception. The ways in which racial injustice is made manifest through our food system are sometimes quite clear and other times murky at best. Data is a powerful tool that can either illuminate or obstruct the reality of injustice. Disaggregating data by race can shed light on systemic oppression.

This report identifies metrics related to racial equity in the food system that are either in use by organizations currently or have been recommended, whether in a publication or through an interview. By documenting the current landscape in this area, this report provides a foundation for the Michigan Good Food Charter Shared Measurement Advisory Committee to consider and select a set of metrics that can be used at state (Michigan) and local levels to track progress towards an equitable food system. The metrics in this report can also provide a foundation for other interested organizations to track progress.

To identify metrics presented in this spreadsheet, over 100 sources were scanned

from reports and peer-reviewed literature touching on race or ethnicity and the food system. Duplicate metrics found in multiple sources were included only once. Personal communication (either interviews or emails) with about a dozen food system experts added several additional suggested metrics and insight on the structure of the list.

Project Scope

To create a set of metrics that are both meaningful and useful, this project focused on data with explicit ties to food and agriculture in the United States. All of the metrics included were chosen in part based on the ability to compare data by race and ethnicity (where available). This report intentionally does not use categories that have been used as a proxy for race (e.g. "urban" for populations of color, or socioeconomic status).

There are many systemic factors, including myriad racialized policies in the U.S., which have contributed to racial inequities in the food system. The influences of these policies show up in the food system and are central to a comprehensive understanding of racial

equity issues in food and agriculture. For instance, in areas hard hit by such policies as redlining and lack of neighborhood investment, we often see a shortage of grocery stores. Likewise, patterns in farmland ownership have roots in slavery and lack of subsequent reparations. However, the metrics included in this project focus on the problems specific to food and agriculture that are often the result of upstream policies, rather than on those policies themselves. For example, we include metrics around food access but not on redlining, and on land ownership but not on reparations. This focus is simply to keep the scope of this project practical, without discounting the deep roots of why things are the way that they are.

There are several food system metrics we intentionally chose to exclude from this report:

• Specific dietary behaviors. Due to the myriad and subjective nature of dietary behaviors and of defining "healthy" food, as well as the complex ways that inequity and disadvantage impact hunger and diet,² this project focused on inequities in access to food rather than measures of food behavior. Oftentimes, recommendations for a "healthy" diet have been racially tone deaf (e.g., the

federal government's recommendation to consume at least 3 cups a day of milk while 75% of African-Americans are lactose intolerant).³ In addition, a collective focus on behavior rather than access can too easily veer into victim-blaming.

- Weight, including "overweight" and "obesity" rates. While body mass index (BMI) has been the commonly accepted way to categorize people's weights, it has been scientifically debunked as a good metric for measuring health and may even be racially biased. Furthermore, a focus on body size has the effect of privileging individuals who conform to societal ideals for appearance while shaming others, thus perpetuating inequities based on physical appearance.
- Health outcomes of dietary behavior

 (e.g., diabetes, cardiovascular disease, stroke). These metrics are not included in this report simply because other sources have extensively covered this topic, including racial disparities in outcomes.⁵

How to Use this Report

Themes

The metrics have been divided into four themes. While several metrics are relevant to multiple themes and sub-themes, each metric is only included once.

 Food access, which focuses on individuals' barriers to consuming the food they deem healthy or want, because of economic resources, knowledge, or the environment around them. Subcategories of food access include food security/hunger, food at schools and early childhood education sites, the community food environment, and food education.

- Food and farm business, which includes factors influencing people's ability to successfully own and operate food- and farm-based businesses. Subcategories of this theme include ownership of land or means of production and business support.
- Food chain labor, which includes metrics
 to measure racial equity among food chain
 workers. Subcategories of food labor include
 income and benefits, upward mobility and
 career opportunities, and labor protections.
- **Food movement**, which is meant to measure equity in who is leading and benefiting from the food movement itself. Metrics touch on topics such as leadership and financials.

Key Terms

Food chain workers

"Food chain workers" include any laborers involved in physically moving food throughout the food system, from farm to fork. Food chain workers include those who "plant, harvest, process, pack, transport, prepare, serve, and sell food."6

• Food movement organizations

"Food movement organizations" broadly include any organization whose focus is explicitly to change or improve the food system. While mission-driven businesses could be considered part of the food

movement, this report focuses on nonprofits and other organizations outside the food supply chain.

Data Types

This report classifies the metrics according to four different types of data.

Secondary

Metrics are classified as **secondary data** when there is a government entity or other organization collecting information on an ongoing basis and making that information publicly available. Little or no additional analysis is needed.

Analysis based on secondary data
 Metrics are classified as analysis based on
 secondary data when existing information,
 sometimes from multiple sources, is
 used to conduct an original analysis.

Primary

Metrics are classified as **primary data** when new information must be collected, such as through a survey. For most of the primary data metrics, an organization has already developed a tool or methodology to collect information for a specific place or group. For information on a broader geography or changes over time, new data collection would be needed.

Suggested

Suggested metrics are based on ideas shared by food system experts for the purposes of this project. These metrics are concepts that have not been fully defined or, to our knowledge, previously measured.



NOTES OF CAUTION

Racism is real but race is a social construct.

There are no inherent or biological differences between races. Race is a social construct—it has changed over time and will continue to change. Because our society treats people of different races differently, lots of outcomes vary by race. When we see differences between races, we are seeing the result of current and historical injustices.

People are more than their race.

While metrics broken down by race can provide a picture of inequities in the food system, categories of race obscure differences within races. These metrics should not be used to treat entire races of people homogenously. All of the metrics presented here should be considered in conjunction with intersectional analyses of inequities based also on factors such as immigration status, primary language, class, culture, and gender.

Isolated data points are not the whole story.

Metrics data should be situated within people's actual lived experiences through qualitative data or other modes that show the ways in which the issue is experienced in people's lives.

Research can be a distraction.

The extent and impact of racism is well-documented; it does not need to be proven further. Gathering data on these or other metrics should be used to inform action or hold ourselves accountable for action, but not as a stalling tactic for taking action.



Food Security and Hunger

	Metric	tric Purpose/ scription	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
	breastfeeding access rate, by race of diff breast systen differe infrast	ess for infants ifferent races to astfeeding ("first food	"White and Latino/a infants, at 44.7% and 46% respectively, are more likely to be breastfeeding at 6 months than Black infants, who breastfeed at 6 months at a rate of 27.5%."	National (Available by state for 3-year estimates)	Individual (Mothers with children aged 19 to 35 months)	Secondary data	The CDC has included questions on breastfeeding in their annual National Immunization Survey (NIS) since 2001. ⁸
2	ű.	ess for households with dren.	Among households with children, 13.1% of black, non-Hispanic households had food-insecure children compared to 10.7% of Hispanic households and 5.6% of white, non-Hispanic households. ⁹	National (Available by state but not by state and race)	Household	Secondary data	Household Food Security in the United States annual report, produced by U.S. Department of Agriculture Economic Research Service. ¹⁰
		d access by race.	Rates of food insecurity were higher than the national average of 11.8% for households headed by black non-Hispanics (21.8%) and Hispanics (18%). ¹¹	National (Available by state but not by state and race)	Household	Secondary data	Household Food Security in the United States annual report, produced by U.S. Department of Agriculture Economic Research Service. ¹²

Food Security and Hunger, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
4	Percentage of majority African- American counties that are also high food-insecurity rate counties	Measures differential food access by race at the county level.	While majority African-American counties form only 3% (N = 105) of the 3,142 counties in the U.S., 92% (N = 97) of them are high food-insecurity rate counties." ¹³	National (Could develop county level analysis by overlaying Feeding America data on food insecurity rates by county with Census Bureau data on racial demographics.)	County	Secondary data	Annual Map the Meal Gap report, produced by Feeding America. ¹⁴
5	Households participating in SNAP, by race/ethnicity, relative to the portion of all households in the state, by race	Indication of disparities in level of need for food assistance.	In Michigan, 13.2% of households have a household member who is black but in 32.5% of households receiving SNAP benefits, the head of household is black. ¹⁵	National (Available by state)	Household	Secondary data (requires combining two data sets)	USDA Characteristics of Supplemental Nutrition Assistance Program Households ¹⁶ and American Fact Finder ¹⁷
6	Proportion of food system workers that are food insecure, by race	Measures inequity in food security for restaurant workers.	"A significantly greater proportion of non-white restaurant worker respondents were food insecure compared to white respondents. In particular, Latino respondents were food insecure at twice the rate compared to those of other races. ¹⁸	286 surveys were collected in New York City and the San Francisco Bay Area.	Restaurant workers	Primary data	Survey of restaurant workers from 2011-2014 based on oversampling of union workers in New York City and a demographic sample in the San Francisco Bay Area. ¹⁹
7	Percentage of SNAP users who will lose food benefits following SNAP work requirements, by race	May measure opportunities of SNAP users to find/retain employment in order to comply with Michigan's new SNAP work requirements.	In Washtenaw County, MI, the unemployment rate for the whole county triggered work requirements. ²⁰ However, employment rates and opportunities were quite disparate in different parts of the county (i.e., the white, wealthy part had a low unemployment rate but the poorer, mostly POC resident part of the county had a higher unemployment rate, which would not have independently triggered the work requirements).		SNAP user	Suggested	

Food at Schools and Early Childhood Education Sites

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
8	Rate of eligibility for national free and reduced-price lunch programs, by race	Measures equity in economic need for nutritional assistance among schoolchildren.	"Overall, 48 percent of public school 4th-graders were eligible for free or reduced-price lunches in 2009. White 4th-graders had the lowest percentage of eligible students (29 percent). The percentages of Black (74 percent), Hispanic (77 percent), and American Indian/Alaska Native (68 percent) 4th-graders who were eligible were higher than the percentages of White 4th-graders and Asian/Pacific Islander (34 percent) 4th-graders who were eligible." ²¹	National (Available by type of school locale — suburban, town, or rural.)	Individual (Youth)	Secondary data	National Center for Education Statistics: Status and Trends in the Education of Racial and Ethnic Minorities. ²²
9	Density of convenience stores, restaurants and snack stores within a short distance (400-800 m) from the main entrance of public secondary schools by racial composition of the school	Measures availability of snacks, sodas, and fast food in the immediate vicinity of a school, which could negate school food policies, especially among students who can leave campus. ²³	"Hispanic youth are particularly likely to attend schools that are surrounded by convenience stores, restaurants, snack stores, or off-licenses. This effect is independent and in addition to poverty." ²⁴	National	School	Analysis based on secondary data	Creates buffer radius from school and calculates store density within that area based on business location data from InfoUSA. ²⁵ School location and demographic data from Department of Education's Common Core of Data. ²⁶
10	Percentage of schools participating in National School Lunch Program offering fresh fruit and vegetables, by predominant race of students	Measures equitable access to fresh produce in the school environment for schoolchildren qualifying for nutrition assistance.	"Majority-black or majority-Latino [public elementary] schools were significantly less likely to offer fresh fruit than were predominantly white schools." ²⁷	Bridging the Gap surveyed schools annually from the 2006-7 school year through the 2012-13 school year.	School	Primary data	Survey tools are available from Bridging the Gap. ²⁸

Food at Schools and Early Childhood Education Sites, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
11	Percentage of Early Childcare and Education (ECE) sites participating in National School Lunch Program offering fresh fruit and vegetables, by predominant race of children enrolled	Measures equitable access to fresh produce in the ECE environment for children qualifying for nutrition assistance.			ECE site	Suggested	
12	Percentage of schools and Early Childcare and Education (ECE) sites who have adequate cafeteria equipment and staffing for fresh produce preparation, by predominant race of student body	May measure differential investment in schools and differential ability to provide fresh, healthy meals to students by race of students.	"Nine of ten schoolsdo not have the necessary kitchen and processing facilities, training, and personnel to handle healthy and raw foods. The reason so many schools lack the necessary infrastructure can be traced to federal policy" ²⁹		School or ECE site	Suggested	
13	Participation of Early Childcare and Education (ECE) sites in the Child and Adult Care Food Program (CACFP), by predominant race of enrolled children	Measures access to federal government oversight to ensure nutritious meals and snacks for children at preschool and daycare sites.			ECE site	Suggested	

Community Food Environment

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
14	Percentage of people who dine out that report having been discriminated against in a restaurant in the prior month, by race	Measures discrimination in the restaurant industry toward patrons. Shows unequal treatment of restaurant patrons based on race.	"A 1997 Gallup poll found that 20 percent of African American respondents reported that they had been discriminated against in a restaurant in the prior month. A 2001 nationally representative sample assessing the pervasiveness of "dining while black" revealed virtually no change over the 1997 figures." ³⁰	National	Restaurant patron	Secondary data	Proprietary data from Gallup Analytics. ³¹ The Gallup Poll Social Series has included data on minority rights and relations since 2001. ³² , ³³
15	Share of census tract population beyond 1 mile (urban areas) or 10 miles (rural areas) from supermarket, by race compared with total tract population by race	Measures food access by race.	"Food desert tracts have a greater concentration of all minorities, including Hispanics. In urban food deserts, this difference was nearly 70 percent in 1990, approximately 60 percent in 2000, and 53 percent in 2005-2009." ³⁴	National (Available by census tract)	Census tract	Analysis based on secondary data	The USDA Economic Research Service Food Access Research Atlas Data Download 2015 includes variables on share of tract population by race. ³⁵ Overall demographic information for census tracks is available from the American Community Survey. ³⁶
16	Retail food environment index (RFEI), ³⁷ by percentage of residents of color in neighborhood	Measures differential access to food outlets.	"on average, there are 2.5 times more fast food restaurants and convenience stores per health reporting area compared to grocery stores." ³⁸	Analysis was conducted for King County, Washington.	Health reporting areas	Analysis based on secondary data	Data for food establishments based on North American Industry Classification System (NAICS) codes was purchased from Salesgenie ³⁹ and then cleaned, analyzed, and mapped.
17	Number of chain supermarkets per zip code, by predominant race of zip code	Measures food access equity (assumes supermarkets provide healthy food access).	"Predominantly black zip codes have about half the number of chain supermarkets compared to predominantly white zip codes, and predominantly Latino areas have only a third as many." ⁴⁰	Data was analyzed for a sample of 28,050 zip codes, representing a total population of 280,675,874 persons.	Zip code	Analysis based on secondary data	Powell et al. ⁴¹ obtained data on food store outlets from Dun & Bradstreet and data on demographics of zip codes from the U.S. Census Bureau.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
18	Racial/ethnic disparity ratio to show the percentage of people of color residing in low supermarket access (LSA) areas compared to people of color in the state or major metropolitan area overall	"The Racial/Ethnic Disparity Ratios identify how unevenly LSA areas are distributed across communities with differing racial/ ethnic compositions." 42	"Rhode Island's Racial/Ethnic Disparity Ratio of 2.3 indicates that the percentage of LSA residents who are people of color is more than two times the percentage of all Rhode Island residents who are people of color."	National (state and major metropolitan area)	Block group	Analysis based on secondary data	Compares distances from block groups to supermarkets. Food outlet data from Nielson. Block group data from American Community Survey. ⁴⁴
19	Grocery store access in affluent census tracts, by predominant race of neighborhood (Accessibility is calculated as a function of travel time)	Measures grocery store access by race in high-income areas.	"Among affluent neighborhoods in Atlanta, those that are predominantly white have better grocery store access than those that are predominantly black, indicating that race may be a factor independent of income."	Analysis was conducted for 564 census tracts in the 10 counties of metropolitan Atlanta.	Census tract	Analysis based on secondary data	Authors used demographic and income data from the U.S. Bureau of the Census 2002 and unpublished data on employment provided by the Atlanta Regional Commission. ⁴⁶
20	Perceived quality of produce and meats offered by different branches of the same supermarket, by predominant race of branch neighborhood	Measures equity in access to quality, healthy foods.	"Supermarkets serving African American communities in Pittsburgh, Pennsylvania, are perceived by residents to offer produce and meats of poorer quality than branches of the same supermarkets serving white neighborhoods."	Data was analyzed for an eastern neighborhood of Pittsburgh.	Super- market branch	Analysis based on secondary data and primary data	Mixed-method approach using GIS, focus groups, and a survey of residents. ⁴⁸
21	Percentage of people who live in a census tract with a supermarket, by race	Measures food access (assumes supermarkets provide healthy food access).	"Another multistate study found that eight percent of African Americans live in a tract with a supermarket compared to 31 percent of whites." ⁴⁹	Data was analyzed for 208 census tracts in Maryland, North Carolina, Mississippi, and Minnesota to produce a national estimate.	Census tract	Primary data	Food stores and food service places were obtained from local health departments and state departments of agriculture and then geocoded. The influence of food stores on dietary behavior was estimated using data from the Atherosclerosis Risk in Communities (ARIC) study. ⁵⁰

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
22	Number of supermarkets per census tract, by predominant race of tract	Measures differential access to supermarkets (assumes supermarkets provide healthy food access).	"Predominantly White and wealthier areas were found to have more supermarkets than were predominantly minority and poorer areas after we accounted for population and geographic size. In contrast, small grocery stores were more common in predominantly minority areas and in poorer areas. In general, poorer areas and non-White areas also tended to have fewer fruit and vegetable markets, bakeries, specialty stores, and natural food stores." 51	Data was analyzed for 685 census tracts in North Carolina, Maryland, and New York to produce a national estimate.	Census tract	Primary data	Information on food establishments was purchased from InfoUSA, data on individuals was obtained from the Multiethnic Study of Atherosclerosis, and information on census tracts was obtained from the US Census. ⁵²
23	Median distance to a large grocery store by residency in a tribal area	Measures differential access to healthy food.	"the median distance to the nearest supermarket was 0.8 mile [sic] for all Americans, compared with 3.3 miles for all tribal area individuals." ⁵³	Data was analyzed for 545 individual tribal areas. ⁵⁴	Tribal area	Primary data	Used Geographic Information System (GIS) methods to compute the number and percentage of populations and population subgroups in 545 tribal areas by nearest distance to food outlets. ⁵⁵
24	Rate of reduction in number of available grocery stores over time, by predominant race of neighborhood	Measures trends in historical disinvestment in neighborhoods by race, and how that has shaped food access disparities.	"from 1997 to 2008predominantly African American neighborhoods and low-income neighborhoods had the smallest increase in food store availability and the greatest reduction in the number of available grocery stores." 56	Data was analyzed for 28,050 zip codes across the U.S.	Zip code	Primary data	Linked outlet density data obtained from Dun & Bradstreet for 28,050 zip codes to Census 2000 data on neighborhood racial and ethnic characteristics. ⁵⁷
25	Number of residents per grocery store, by predominant race of neighborhood	Measures differential access to number of grocery stores (assumes grocery stores provide healthy food access).	"In Washington D.C., the District's two lowest income neighborhoods, which are overwhelmingly African-American, have 1 [grocery store] for every 70,000 residents compared to 1 [grocery store] for approximately every 12,000 residents in two of the District's highest income and predominantly white neighborhoods." 58	Data was collected for Washington D.C.	Neighbor- hood (Ward)	Primary data	Authors identified and surveyed "grocery stores" (national and regional chain and independent supermarkets and discount grocers), then calculated the ratio of grocery stores to total population for wards in the District of Columbia. ⁵⁹

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
26	Mean quality of fresh produce in food stores, by predominant race of community	Goes beyond measuring access to produce to measuring equity in access based on the level of quality in produce sold.	"Mean quality of fresh produce was significantly lower in the predominantly African-American, low-SEP community than in the racially heterogeneous, middle-SEP community." 60	Data was collected for four communities in the Detroit area.	Comm- unity	Primary data	In-person observations of produce quality at 304 food stores located in the four selected communities, using USDA criteria for evaluating quality of produce. ⁶¹
27	Percentage of people who shop at a grocery store that report having been discriminated against or treated poorly at that store in the past, by race	Measures discrimination in the grocery store industry toward patrons. Shows unequal treatment of grocery store patrons based on race.			Store	Suggested	
28	Percentage of people exposed to prison food/juvenile justice center food of different races ⁶²	Measures inequities in food access by including incarcerated populations, whose access to food is restricted to what may be substandard. Racial disparities in who is incarcerated might also justify why substandard prison food is socially acceptable.			Individual	Suggested	
29	Number of hours per week spent in transit to and from food shopping, by race	Measures equity in access to food outlets in terms of time spent in transportation to shopping.			Individual	Suggested	

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
30	Number of socially- conscious food- based businesses, (e.g. consumer cooperatives or food hubs), by predominant race of neighborhood	Measures access to healthy, sustainable, and locally-sourced foods at affordable prices. (Assumes that food hubs and cooperatives source healthy and sustainable food locally and offer affordable prices.) ⁶³			Coopera- tive or food hub	Suggested	
31	Siting of agricultural facilities with by-products harmful to health or the environment, by predominant race of nearby residents	Measures inequities in exposure to harmful spillover, contamination, or runoff from agricultural production facilities, such as CAFOs (confined animal feeding operations).	"Hog operations are approximately 5 times as common in the highest three quintiles of the percentage nonwhite population as compared to the lowest, adjusted for population density. The excess of hog operations is greatest in areas with both high poverty and high percentage nonwhites." 64		Census block	Suggested	

Food Education

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
32	Percentage of SNAP users receiving SNAP- Ed education, by race	Measure of equity in opportunities for knowledge building around nutrition and cooking.			Individual	Suggested	
33	Percentage of K-12 students receiving nutrition education, by race	Measure of equity in opportunities for knowledge building around nutrition and cooking.			Individual	Suggested	
34	Percentage of food system education projects (e.g. nutrition classes, school garden projects) that use a racial equity lens in their curricula (e.g. adhere to a Critical Food Systems Education model)	"While its proponents see these programs as redressing socioeconomic inequalities, food systems education is insufficient for helping youth understand the racialized injustices inherent to the current food system, and their capacity to transform them through collective action." 65			Program	Suggested	



FOOD & FARM BUSINESS

Ownership of Land and Means of Production

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
3	Percentage of agricultural land ownership, value, and acreage, by race	Reveals inequity in control over the means of agricultural production.	"Of all private U.S. agricultural land, Whites account for 96 percent of the owners, 97 percent of the value and 98 percent of the acres." 66	National (State level data is available for the 25 states with the largest agricultural cash receipts.)	Land owner	Secondary data	The USDA Tenure, Ownership, and Transition of Agricultural Land (TOTAL) Survey, most recently conducted in 2014, assesses all land rented out for agricultural purposes. ^{67,68} The TOTAL survey is a more detailed picture of land ownership than the Census of Agriculture, which studies farmers rather than all agricultural landowners.
3	Farm ownership, by race	Measures trends in agricultural land ownership, by race.		National (Available by state and county) ⁶⁹	Farm owner	Secondary data	The USDA Census of Agriculture is conducted every 5 years, most recently in 2017. ⁷⁰
3	Number of farm operators, by race	Measures trends in agricultural operating status, by race.	"Census figures show 1920 as the peak year in the number of [people of color] owners of farmland in the South." ⁷¹	National (Available by state and county) ⁷²	Farm operator	Secondary data	USDA Census of Agriculture - Selected Producer Characteristics by Race in 2017 ⁷³ and Race, Ethnicity, and Gender Profiles in 2012 ⁷⁴

FOOD & FARM BUSINESS Ownership of Land and Means of Production, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
38	Average age of farm operators, by race	Indicates intergenerational transfer of land by race.	"Black land loss and lack of intergenerational transfer of land remains a significant problem to this day. In addition, the average age of African American farmers is much higher than other farmers — 62 compared to 58.3. Reversing a more rapidly aging farming population[is an] imperative structural change."	National (Available by state and county) ⁷⁶	Farm operator	Secondary data	USDA Census of Agriculture - Selected Producer Characteristics by Race in 2017 ⁷⁷ and Race, Ethnicity, and Gender Profiles in 2012 ⁷⁸
39	Rate of agricultural land loss in acres, by race of operator	Measures access to and control of resources for food production.	"The trend of land loss continues today — devastating families of all races. Between 1982 and 2012, over 72 million acres (7.3% of all agricultural land) was lost to commercialization, prospecting, and "development". And while farmers of color have increased slightly over the last five years, during this entire time period, Black farmers lost more than 600,000 acres, about 20% of their land compared to 7.3% lost by farmers of other races."	National (Available by state and county) ⁸⁰	Acre	Analysis based on secondary data	USDA Census of Agriculture (Requires accessing data on operators by race from multiple Census years to calculate change in acreage.)
40	Number of food- based business owners, by race	Measures equity in financial benefit from and control of food-based businesses. Could focus on specific business types, (e.g. grocery stores or food hubs).	"No organizations track the number [of grocery stores owned by people of color], but sources familiar with the situation and some of the remaining grocers suggest that fewer than 10 Black-owned supermarkets remain across the entire country. And the numbers continue to shrink: In the past two years alone, Sterling Farms in New Orleans, Apples and Oranges in Baltimore, and several branches of Calhoun's in Alabama have all gone out of business."81		Business owner	Suggested	

FOOD & FARM BUSINESS Ownership of Land and Means of Production, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
4	Percentage of people with an ownership stake in worker-owned food cooperatives, by race	Measures equity in a financial benefit from and control of food sales.		National	Worker- owner	Suggested	

FOOD & FARM BUSINESS

Business Support

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
42	Percent of principal farm operators with internet access, by race	Internet access is key to accessing markets for selling goods, so this metric measures unequal market access.	"Black, Latino and Native American farmersare more likely to lack internet access"82	National (Available by state but not by race within states)	Principal farm operator	Secondary data	USDA Census of Agriculture ⁸³
43	Share of monetary benefit from federal government programs, such as receiving commodity direct payments or participating in conservation programs, by race of farm operator	Measures unequal support of farmers by U.S. government. ⁸⁴	"The U.S. government spends billions each year subsidizing farm operations. Yet Black farmers receive only one-third to one-sixth of the benefits that other farmers receive." 85	National (Available by state and county) ⁸⁶	Farm operator	Analysis based on secondary data	USDA Census of Agriculture - Race, Ethnicity, and Gender Profiles ⁸⁷ (Requires calculating share of government program funds relative to portion of farm operators by race.)
44	Percentage of Small Business Administration (SBA) loans going to food-based business owners of color	Measures trends in equity of financial support of entrepreneurs, including food businesses.	"The number of Small Business Administration loans that went to black-owned businesses dropped significantly and disproportionately between 2008 and 2014."88	National	Loan	Analysis based on secondary data	SBA data — analysis by Wall Street Journal ⁸⁹
45	Percentage of food-oriented trade association membership, by race	Measures equitable access to benefits of professional trade associations.			Trade association	Suggested	

FOOD & FARM BUSINESS

Business Support, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
46	Percentage of media articles on food businesses that focus on businesses owned by people of color	Media coverage is an important component of business success. It is also a measurement of relationships with the media establishment. This metric contributes to a picture of who the media focuses on and thus propels forward.			Article	Suggested	
47	Percent set aside for community of colorowned businesses in institutional procurement contracts	Measures intentional improvements of market access to producers of color, who are often left out of contracting opportunities.	"procurement policiesshould prioritizecommunity of color-owned businesses to support farmers of color or value-added producers that are people of color, who are often shut out or overlooked when it comes to contracting opportunities." 90		Contract	Suggested	
48	Percentage of food- based business owners with potential to participate in healthy food financing programs that possess basic readiness to apply for loans (e.g., basic bookkeeping practices are already instituted), by race	Measures structural inequalities in education, business preparedness that perpetuate inequity in food business opportunities.			Business owner	Suggested	

FOOD & FARM BUSINESS

Business Support, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
49	Percentage of food- based businesses and entrepreneurs that possess basic readiness to bid for government procurement contracts (e.g. administrative capacity, etc.), by race	Measures structural inequalities in education, business preparedness, economic assets that perpetuate inequity in food business opportunities.			Business or entre- preneur	Suggested	
50	Percentage of food hubs actively engaged in advancing racial equity and number of activities	Measures level of activity around racial equity among food hubs. Also reflects guidance and resources available to support food hubs in engaging in advancing racial equity.	"We were struck by the relatively low percentage of food hubs reporting that 'addressing racial disparities through access to healthy food' and 'increasing minority producers'/suppliers' access to markets' were 'strongly related' to their mission and/or daily operations."91		Food hub	Suggested	



Income and Benefits

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
51	Ratio of median annual wages in the food chain, by race and gender	Measures differences in food chain labor income.	"For every dollar of median income a white man earned, men of color made 20 to 40 cents lessAsian women made 68 cents, Black women made 53 cents, and Latina women made 50 cents."92	National	Worker	Analysis of secondary data	Analysis of economic and demographic data from the American Community Survey (ACS) over a 3-year period (2006 to 2008). ⁹³
52	Gap in median hourly wages between whites and people of color in four food sectors: production, processing, distribution, and service	Measures differences in food chain labor income.	"Our findings were that food service workers as a whole made low wages, but in most of these occupations, people of color made less than whitesFor example, half of all white bartenders earned \$11.41 an hour, while the median hourly salary for bartenders of color was 77 cents less per hour than that of their white counterparts."	National	Worker	Analysis based on secondary data	Analysis of economic and demographic data from the American Community Survey (ACS) over a 3-year period (2006 to 2008). ⁹⁵

Income and Benefits, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
53	Percentage of tipped workers living in poverty, by race	Measures economic equity in food chain labor and may imply discrimination by clients.	"The fact that the federal tipped minimum wage has remained at \$2.13 for over 22 years has led to greater poverty among all workers, but a comparison by race shows a particularly severe effect on certain groups: over 20% of Latino and African American, and 19% of Native American, tipped workers live in poverty, compared to less than 14% of White workers." ⁹⁶	National	Worker	Analysis based on secondary data	ROC-United analysis of Current Population Survey 2010-2012. Integrated Public Use Microdata Series (IPUMS).
54	Percentage of food chain workers making poverty wages, by race	Measures economic equity in food chain labor.	"Race is strongly related to California food retail workers' earnings — people of color were three times more likely than white workers to report earning subminimum wages, and nearly twice as likely to earn an income below the poverty level." 97	925 surveys were collected from food retail workers in four regions of California.	Worker	Primary data	The Food Labor Research Center conducted a convenience sample survey in person outside food retail workplaces. The authors determined real earnings based on gross earnings and average hours worked per week. Poverty was considered less than or equal to 70% of the 2013 Lower Living Standard Income Level (LLSIL) for a given region, or \$22,458.98,99
55	Percentage of food chain workers making less than minimum wage, by race	Measures economic inequity of food system workers, by race.	"Low wages cuts across the food chain, but hurts workers of color more. Almost one out every four Asian food workers earns a subminimum wage. 30% of indigenous workers make less than minimum wage and close to a quarter of Latino and over 20% of Black food workers earn subminimum wages."	629 surveys of food system workers, including at least 80 surveys in each segment of the food chain.	Worker	Primary data	Convenience sample survey conducted face- to-face at workplaces, in the community, or in workers' homes. ¹⁰¹

Income and Benefits, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
56	Percentage of food chain workers with no health insurance, by race	Measures inequities in access to health insurance.	"Black and Latino [food chain] workers disproportionately lack health insurance, at 59%, and more than 85% of indigenous food workers don't have coverage." ¹⁰²	629 surveys of food system workers, including at least 80 surveys in each segment of the food chain.	Worker	Primary data	Convenience sample survey conducted face- to-face at workplaces, in the community, or in workers' homes. ¹⁰³ , ¹⁰⁴
57	Percentage of food chain workers with no paid sick days, by race	Measures inequities in access to paid sick days.	"Workers in the food system reported not having access to benefits that would allow them to care for themselves and their families when sick or injured. 60 percent of food system workers reported not having paid sick days, and an additional 19 percent reported not even knowing if they had paid sick days. Only 21 percent of all workers surveyed confirmed that they had paid sick days."	629 surveys of food system workers, including at least 80 surveys in each segment of the food chain.	Worker	Primary data	Convenience sample survey conducted face- to-face at workplaces, in the community, or in workers' homes. ¹⁰⁶ , ¹⁰⁷
58	Proportion of restaurant workers that are food insecure	Measures economic and food access equity in food chain labor.	"A significantly greater proportion of non-white restaurant worker respondents were food insecure compared to white respondents. In particular, Latino respondents were food insecure at twice the rate compared to those of other races." 108	286 surveys were collected in New York City and San Francisco Bay Area.	Worker	Primary data	In-person surveys conducted outside of workplaces between shifts or during breaks; administered in languages common to restaurant workers including English, Spanish, French, and Vietnamese. ¹⁰⁹
59	Earning segments for food chain workers, by race and union status	Measures disparities in wages by race and indicates the moderating influence of unions. Earning segments are categorized as 1) subminimum, 2) poverty, 3) low, and 4) livable.	"We found that white workers reported earning more than workers of color among both union and non-union workers. However, having a union makes a tremendous difference in reducing the percentage of people of color who earn below a sub minimum wage level, and in minimizing racial differences generally." 110	925 surveys were collected from food retail workers in four regions of California.	Worker	Primary data	The Food Labor Research Center conducted a convenience sample survey in person outside food retail workplaces. The authors used Census data to identify the proportions of food retail workers by region, union status, race, and gender and weighted survey responses to be reflective of the California Food Retail Industry. ¹¹¹

Income and Benefits, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
60	Wage gap between white workers and workers of color, by sector	Measures inequality in food chain labor income.	"This fact [of a racial wage gap] was confirmed by our survey data, in which the wage gap between white workers and workers of color was largest in the food processing and distribution sector, at \$3.07."	629 surveys of food system workers, including at least 80 surveys in each segment of the food chain.	Worker	Primary data	Convenience sample survey conducted face- to-face at workplaces, in the community, or in workers' homes. ¹¹³
61	Average hourly tips received by restaurant workers, by race (controlling for differences in region, type of dining establishment, and hours of shift)	Indicates possible discrimination against restaurant workers by patrons.			Worker	Suggested	

FOOD CHAIN LABOR

Upward Mobility and Career Opportunities

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
62	Percentage of managerial jobs in the food system occupied by people of color	Measures economic opportunity for workers in the food system, by race.	"Workers of color populated rank- and-file positions at a higher rate than management positions. 44% of rank-and-file workers were people of color, while only 15% of managers were people of color." ¹¹⁴	National	Occupa- tion	Analysis based on secondary data	Analysis of economic and demographic data from the American Community Survey (ACS) over a 3-year period (2006 to 2008). ¹¹⁵
63	Percentage of food chain workers that are employed as managers, by race	Measures access to higher paid jobs in the food system.	"Almost half of white men working in the food chain were employed as managers, while less than 10 percent of workers of color held comparable positions." 116	National	Worker	Analysis based on secondary data	Analysis of economic and demographic data from the American Community Survey (ACS) over a 3-year period (2006 to 2008). ¹¹⁷

Upward Mobility and Career Opportunities, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
64	Percentage of people who are CEOs in food industries, by race	Measures access to higher paid jobs in the food system.	"More than 72 percent of the chief executive officers in food industries were white menFewer than 15 percent were white women. Latino men composed five percent of CEOs; Black men and Latino females comprised less than two percent." 18	National	CEO	Analysis based on secondary data	Analysis of wage and salary workers from American Community Survey (2010-2014). ¹¹⁹
65	Percentage of food retail workers reporting having received a raise, by race	Measures differential ability to advance out of poverty.	"Among non-union [food retail] workers, we found a substantial difference between white workers and workers of color reporting that they had received a raise." 120	925 surveys were collected from food retail workers in four regions of California.	Worker	Primary data	The Food Labor Research Center conducted a convenience sample survey in person outside food retail workplaces. The authors used Census data to identify the proportions of food retail workers by region, union status, race, and gender and weighted survey responses to be reflective of the California Food Retail Industry. ¹²¹
66	Proportion of people of color in low-wage jobs in fine-dining restaurants	Measures differences in economic opportunity by race within the restaurant industry.	"Workers of color are concentrated in lower-level busser and kitchen positions in fine-dining restaurants and overall in segments of the industry in which earnings are lower." 122	Data was collected at 45 fine-dining restaurants in Manhattan.	Fine dining establish- ment	Primary data	Canvassers tabulated the number of white workers, workers of color, and male and female workers they observed holding various front-of- the house positions. ¹²³
67	Percentage of food chain workers reporting having had opportunities to apply for promotions, by race	Measures access to upward mobility in food system work.	"20.2 percent of Black workers reported having the opportunity to apply for better positions, while close to 30 percent of White, Latino, and Asian workers reported having this opportunity." 124	629 surveys of food system workers, including at least 80 surveys in each segment of the food chain.	Worker	Primary data	Convenience sample survey conducted face- to-face at workplaces, in the community, or in workers' homes. ¹²⁵

Upward Mobility and Career Opportunities, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
68	Percentage of food chain workers reporting having received promotions, by race	Measures access to upward mobility in food system work.	"Furthermore, only 11.7 percent of Black workers reported actually receiving promotions, compared to more than one in five workers in other racial groups." ¹²⁶	629 surveys of food system workers, including at least 80 surveys in each segment of the food chain.	Worker	Primary data	Convenience sample survey conducted face- to-face at workplaces, in the community, or in workers' homes. ¹²⁷
69	Percentage of food retail workers receiving training in new skills needed to receive a promotion, by race	Measures access to upward mobility in food system work.	"For example, we found a statistically significant difference in the frequency with which white workers and workers of color reported they had received the training needed to receive a promotion in Los Angeles" 128	925 surveys were collected from food retail workers in four regions of California.	Worker	Primary data	The Food Labor Research Center conducted a convenience sample survey in person outside food retail workplaces. The authors used Census data to identify the proportions of food retail workers by region, union status, race, and gender and weighted survey responses to be reflective of the California Food Retail Industry. ¹²⁹
70	Likelihood to be hired for a fine- dining server position, by race	Measures differences in economic opportunity by race within the restaurant industry.	"Matched pair testing showed that Testers [job applicants] of color were only 54.5% as likely as white testers to get a job offer, and were less likely than white testers to receive a job interview in the first placeThe work experience of white testers was twice as likely to be accepted without probing" 130	Researchers completed 138 tests on New York City fine-dining restaurants.	Job applicant	Primary data	Pairs of research assistants ("testers") with equal qualifications but different races applied simultaneously for the same job vacancy. ¹³¹
71	Percentage of restaurant employers who make hiring decisions based on a belief that the restaurant's customers prefer contact with white employees	Measures discriminatory hiring practices in the restaurant industry that are based on conscious perceptions around customers' racial preferences.	"Workers that have continual contact with customers tend to be white, while Black, Latino, and other groups of color tend to be hired into positions that are not seen by patrons." 132		Restaurant employer	Suggested	

Labor Protections

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
72	Racial composition of retail grocery workforce by union status	Measures collective bargaining power by race within the grocery workforce.	"workers of color make up a far greater percentage of the lower paid, non-unionized grocery workforce than of the higher paid, unionized grocery workforce; 73% of all non-unionized grocery store workers are people of color, whereas only 54% of all unionized grocery store workers are people of color." 133	Data was analyzed for California	Grocery store workforce	Analysis based on secondary data	Data on union membership are collected as part of the Current Population Survey (CPS), a monthly sample survey of about 60,000 eligible U.S. households. ¹³⁴
73	Occupations in the food chain excluded from basic labor protections (e.g. minimum wage and collective bargaining rights), coupled with predominant race/ ethnicity/immigration status of people in those occupations	Measures inequities in access to labor protections. Though exclusions from protections are not based on race, this coupling of metrics measures how exclusions from basic federal protections have been and are racialized.	"Racial prejudice has also played an important role in excluding farmworkers from the protections of labor laws. Like other manual laborers, farmworkers have often been ethnic minorities or immigrants. The migrant farmworker population was predominantly made up of African Americans before 1960 and, since then, is increasingly made up of recent immigrants and foreign guest workers from Latin America." 135	National	Food chain occupa- tions	Secondary data and primary data	The National Agricultural Workers Survey maintains data on race and immigration status of U.S. crop workers. ¹³⁶ State labor laws can be reviewed to identify exceptions for food chain workers. ¹³⁷
74	Percentage of food chain workers reporting wage theft, by race	Measures inequity in treatment of workers in the food system by race.	"More than one-fifth of all workers of color reported experiencing wage theft, while only 13.2 percent of all white workers reported having their wages misappropriated." 138	629 surveys of food system workers, including at least 80 surveys in each segment of the food chain.	Worker	Primary data	Convenience sample survey conducted face- to-face at workplaces, in the community, or in workers' homes. ¹³⁹
75	Percentage of food chain workers reporting having been discriminated against by their employers, by race	Measures inequity in treatment of workers in the food system, by race.	"Black, Latino, and Asian workers felt discriminated against at more than twice the rate reported by White workers (38% v. 18%)." ¹⁴⁰	629 surveys of food system workers, including at least 80 surveys in each segment of the food chain.	Worker	Primary data	Convenience sample survey conducted face- to-face at workplaces, in the community, or in workers' homes. ¹⁴¹

Labor Protections, cont.

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
76	Percentage of workers experiencing employment law violations, by race	Measures differential experiences of employment law violations, such as being sent home early with no pay, having a shift canceled on the same day it is scheduled, or not being offered a lunch break, by race.	"Blacks, Latinos, and mixed race workers reported the highest levels of employment law violations Blacks and mixed race workers reported the highest levels of being sent home early with no pay, while Latinos reported the highest rates of working off the clock." 142	925 surveys were collected from food retail workers in four regions of California.	Worker	Primary data	The Food Labor Research Center conducted a convenience sample survey in person outside food retail workplaces. The authors used Census data to identify the proportions of food retail workers by region, union status, race, and gender and weighted survey responses to be reflective of the California Food Retail Industry. ¹⁴³
77	Rates of occupational injury and illness of food chain workers, by race	Measures differences in exposure to hazardous work conditions.				Suggested	



FOOD MOVEMENT

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
78	Percentage of food movement organizations with policies to ensure representation by people of color in paid and/or leadership positions.	Measures how organizations in the food movement may serve communities of color but not adequately represent or empower people of color.	"Indeed, a 2013 survey of food justice organizations confirms that only 16% of respondents work for organizations that "have policies that ensure representation of community members in paid and/or leadership positions" yet 79% of respondents indicated that issues of racial, ethnic, socio-economic, gender, sexuality, political, and generational inequalities affect their organizations." 144	105 surveys were collected from across the U.S.	Organiza- tion	Primary data	National survey of self-identified food justice organizations, recruited through emails, listservs, etc. ¹⁴⁵
79	Percentage of staff in leadership positions in food movement organizations, by race	Measures who holds power in influencing the direction of the food movement.	"Of the 13 organizations in the North East [sic] with a staff of 10–35, the leadership positions are 84% white to 16% people of color and their board members are 11% people of color and 89% white." 146	36 interviews were conducted with leaders of community food organizations in New York and Massachusetts.	Worker	Primary data	Interviews with community food organizations ¹⁴⁷
80	Percentage of board members for food movement organizations, by race	Measures who holds power in influencing the direction of the food movement.		36 interviews were conducted with leaders of community food organizations in New York and Massachusetts.	Board member	Primary data	Interviews with community food organizations ¹⁴⁸

FOOD MOVEMENT

	Metric	Metric Purpose/ Description	Example	Scale (granularity)	Unit of Analysis	Data Type	Data Source or Methodology
81	Percentage of school food service directors, by race	Measures who holds power in influencing the direction of the food movement, particularly in schools.			School food service director	Suggested	
82	Percentage of food movement organizations that require racial equity training for their staff/fellows	Measures dedication to racial equity among food movement organizations.			Organiza- tion	Suggested	
83	Level of multicultural competency among staff in food movement organizations	Measures capacity to work from an equity lens and ability to work with diverse populations.			Individual	Suggested	
84	Percentage of food movement organizations collecting data on racial equity as indicators of progress in their work	Measures dedication to racial equity within the food movement, specifically within monitoring and evaluation activities.			Organiza- tion	Suggested	
85	Amount of funding attracted by food movement organizations, by race of leadership	Measures equity in access to funding among food movement organizations.			Organiza- tion	Suggested	
86	Economic viability of interventions/projects encouraged by the food movement for communities of color (e.g. projected annual revenue, jobs created, etc.)	Measures economic reward vs. amount of work demanded in projects encouraged by the food movement as solutions to food system problems in communities of color.	Food system organizations often encourage urban farms or gardens in communities of color. However, these farms demand a tremendous amount of work and offer little financial reward. This is especially true in places like Michigan with long winters.		Project	Suggested	

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