

# FARM TO SCHOOL PARTICIPATION INTENSITY

Significant investments are being made at the state and national levels to support Farm to School (FTS) - defined as one or more activities in schools that involve procurement of local foods, school gardens, and agricultural education. Though the research of the impacts of FTS activities are mixed, there is some evidence to suggest that the more activities in which a school participates, the more likely kids, communities, and farms are to benefit (e.g., Christensen et al. 2017, Prescott et al. 2020). In this fact sheet, we present methods for calculating the intensity of FTS participation across the U.S. We hope this information is useful for practitioners and researchers in thinking about evaluating and comparing their programming.

## FTS Intensity

We create three measures of FTS intensity, designed to show where a particular SFA falls on a scale ranging from lesser to higher degree of FTS participation – each of which is calculated based on responses that the School Food Authorities (SFAs)<sup>1</sup> provided to the U.S. Department of Agriculture's Farm to School Census for the school year of 2018-19<sup>2</sup>. The three measures of FTS intensity are as follows:

- 1. Procurement intensity: Shows the degree to which a SFA is engaged in procuring local foods.** This intensity measure includes (i) the number of activities involving procuring and serving local foods in the school cafeteria, (ii) frequency of serving local foods including fruits, vegetables, protein, and grains, (iii) the expenditure on local foods as a proportion of total food expenditure, (iv) the number of education and promotion activities directly related to procurement activities like taste tests and Harvest of the Month, and (v) strategic activities at schools to facilitate and assist in procurement of local foods.
- 2. Education intensity: Shows the degree to which a SFA is engaged in food, nutrition, garden, or agricultural education.** This intensity measure includes (i) the number of garden-based activities in schools, (ii) food, nutrition, and agricultural education in the classroom, and (iii) community awareness programs like student field trips to top farms and celebrating National Farm to School Month (October).
- 3. Overall FTS intensity: Shows the degree to which a SFA is engaged in FTS activities.** This intensity measure is calculated by adding together procurement intensity and education intensity. Additionally, this includes a component of staffing that represents hiring of dedicated staff, and training opportunities for FTS related activities. The intensity measure ranges from 0 to 16, where zero represents a SFA that does not participate in any FTS activity and 16 represents a SFA with the highest participation. The overall measure allows us to evaluate the breadth of program adoption based on the core objectives of FTS.

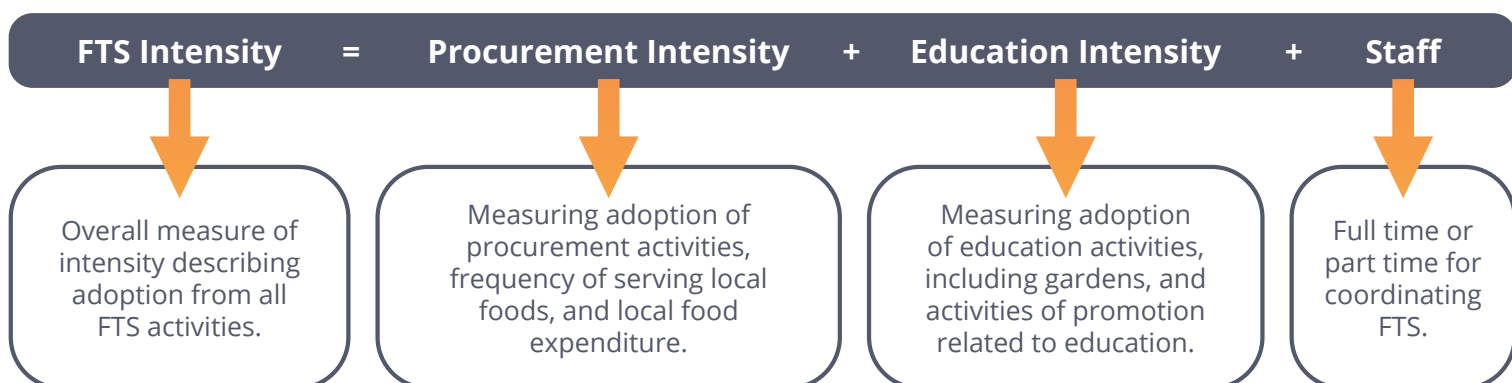
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## Key Takeaways

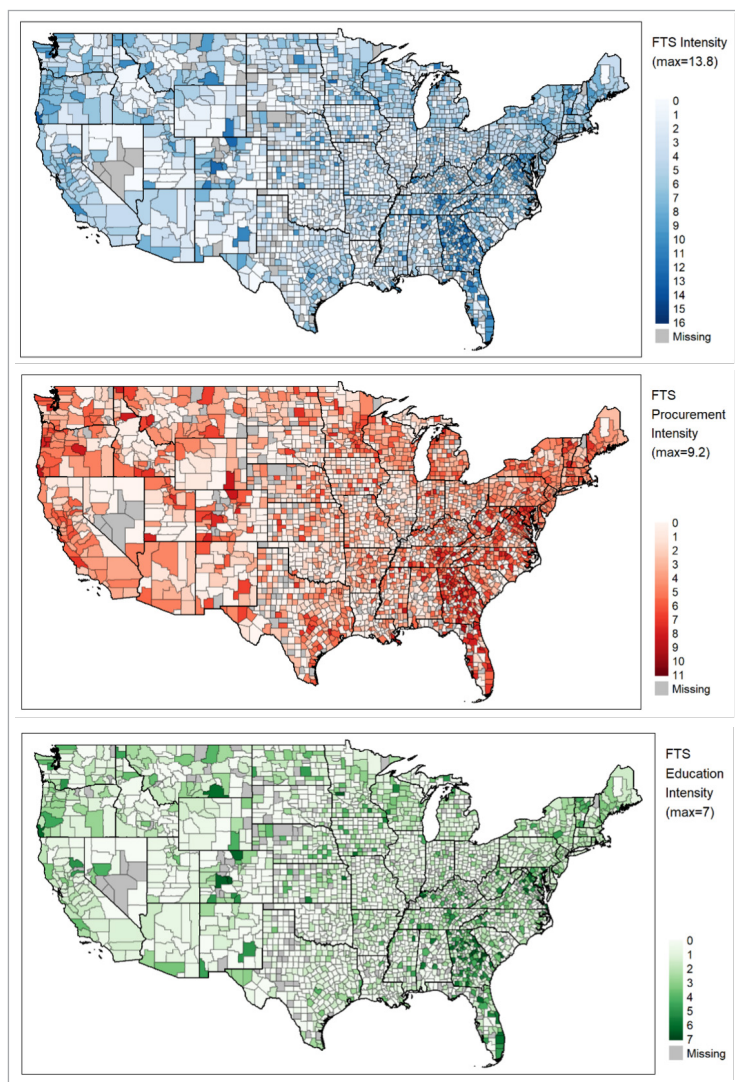
- » Higher FTS Intensity represents broader levels of participation in FTS activities.
- » Participation in a higher number of procurement and education activities will result in a higher intensity measure.
- » Use data on high and low intensity to identify best practices, opportunities for peer-to-peer connections, as well as counties that may require further support.





A challenge with our approach to measuring intensity is that it does not take into account intensity of participation within a type of activity for most activities. In other words, SFA X could take a field trip to visit a farm once, whereas SFA Y could visit the farm several times throughout the year. Based on our current intensity calculation, the field trip activity would ‘count’ in the same way for both SFAs towards their measures of intensity. Additionally, participation could also vary across schools within a SFA. As a result, the level of intensity does not reflect the number of schools or students that are participating in the reported activity. Some metrics are weighted – for serving of local foods in the cafeteria, intensity will be higher for SFAs that serve local foods more frequently and those that spend a higher proportion of their total food expenditures on local foods. For a detailed discussion of definition of ‘local’, limitations of the Census data, and discussion of activities, refer to the 2019 FTS Census Report<sup>3</sup>.

We aggregate the three intensity measures at the county level, weighted by each SFA’s student count, and plot them on the U.S. map<sup>4</sup>. This helps us to visually explore the diversity of FTS participation and intensity across region, as well as within and across states. We can identify clusters of high and low participation across the country. We can see, for example in Colorado, the western counties have higher intensity than the eastern counties, and have counties with higher intensity as compared to counties in neighboring states like Wyoming and Utah. We can see clusters of higher participation along the two coasts as well as in the South-East.







## Putting FTS Intensity Measures to Use

These FTS Intensity measures can be used to identify high and low participation counties, the factors associated with each, and matching similarly performing counties and states. Separate procurement and education intensity measures allow us to examine the potential benefits to the local producers and students respectively. We have collaborated with the Central Analytics Team at Mountain Plains Region Office of U.S. Department of Agriculture's Food and Nutrition Service to integrate the FTS intensity measures in their Interactive Nutrition Dashboard Suite (an interactive website that displays data on nutrition, food security, and other health outcomes at the county level for each state), and by doing so, assess FTS intensity in the context of the local food and food access environments. This can also aid in identifying next steps for program adoption and guide grant support (through USDA's Local Food for Schools Cooperative Agreement Program for example), policy support (through state FTS legislations), and other ways of assisting SFAs with FTS activities.

## What is Farm to School?

FTS activities take place in the cafeteria (e.g., procurement of local foods and cafeteria promotions), the classroom (e.g., integrating nutrition and/or agricultural education), or outside the classroom (e.g., school gardens, farm visits).

## USDA Farm to School Census

U.S. Department of Agriculture's Food and Nutrition Service (USDA FNS) conducted the third Farm to School Census, for the school year 2018-19, to better understand participation in FTS activities, challenges, expenditures, and future needs, surveying every SFA that participates in the USDA FNS National School Lunch Program.

<sup>1</sup> A School Food Authority (SFA) is the entity responsible for the administration of school food service operations. It may or may not be the same as the corresponding school district and could be collectively managing several school districts.

<sup>2</sup> <https://farmtoschoolcensus.fns.usda.gov/>

<sup>3</sup> <https://www.fns.usda.gov/f2s/farm-school-census-and-comprehensive-review>

<sup>4</sup> If the number of students reported in the 2019 FTS Census aggregated at the county level fall short of 50% of the number reported by the Common Core of Data (CCD), we drop the SFAs in that county.



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