

# Development of a Community-based Meal Kit Program for Diverse Communities with Low Income and High Food Insecurity

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## Background

A meal kit program piloted in a single community for families with low income showed positive impacts on diet quality, perceived stress, and child engagement in family mealtimes<sup>[1]</sup> <sup>[2]</sup>. This program was expanded to reach families with low income in three communities with food insecurity rates higher than the national average<sup>[3]</sup>: Alachua (rural), Putnam (suburban), and Orange (urban).

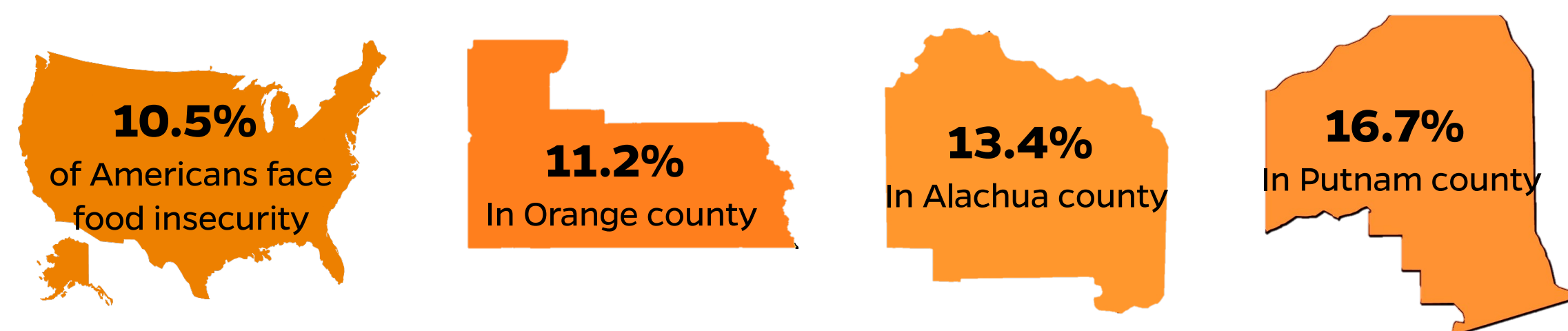


Figure 1. Food Insecurity Rates

### Food Security and Food Waste Paradox

In 2020, over 38 million people lived in food-insecure households<sup>[4]</sup>, yet an estimated 30-40% of the food produced in the US is wasted<sup>[5]</sup>. Food banks are only able to rescue a small fraction of the food that is safe and wholesome to distribute to families in need, and the rest ends up in landfills<sup>[5]</sup>. Food waste can exacerbate food insecurity by decreasing food availability, increasing food prices, and harming future food production through irresponsible use of natural resources<sup>[6]</sup>.

### Reducing the Carbon Footprint of Food Waste

In 2018, food alone accounted for over one-fifth of the trash material at landfills and combustion facilities, where it emits a powerful greenhouse gas called methane<sup>[7]</sup>. Reducing food waste saves money, helps people, and conserves resources<sup>[7]</sup>. Research has shown that portion control (meal kits among the options) is one of the most effective ways to reduce food waste, particularly at the retail and consumption stages<sup>[6]</sup>.

## Objective

To develop a community-based meal kit program that increases fresh food access in diverse communities with low income.

## Methods

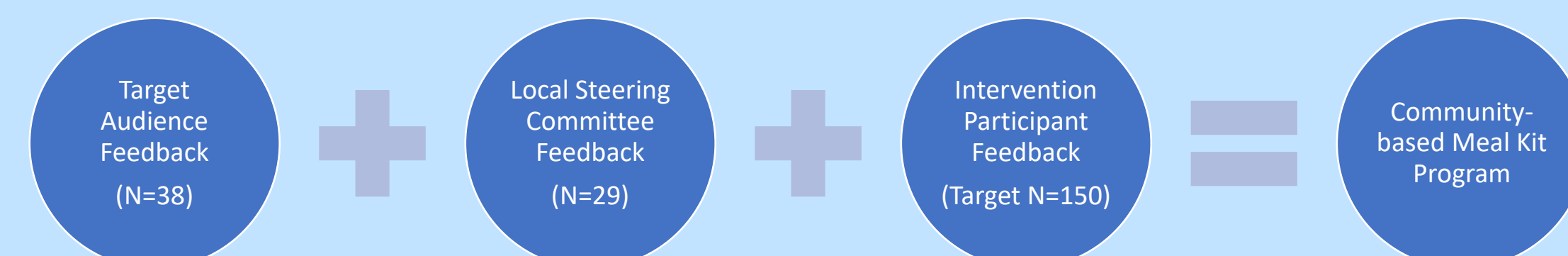


Figure 2. Summary of Meal Kit Program Development Process

### Steering Committee Eligibility

- Highly engaged in target community (through civic organization or school)
- Knowledgeable of community needs

### Target Audience/ Intervention Participant Eligibility

- Adult (age 18+)
- Main preparer of food
- Lives with child (< age 18)
- Qualify for food assistance programs (WIC, SNAP, TANF, etc.)

## Intervention

- Slice and Spice: 6-week program
- Families receive:
  - 3 nutritious meals\* for a family of 4 each week with step-by-step instructions
  - nutrition education materials
  - cooking utensils
- Consumer, health, and/or nutrition data are collected:
  - before receiving their 1<sup>st</sup> meal kit
  - weekly
  - at the end of the 6-week program
  - 6 months after the program ends

\*Recipes meet specific nutrition guidelines based on the 2015 DGA and include plant-based or animal protein. Local high school (HS) culinary arts students will assemble the kits, and the agriscience program will grow a variety of produce to contribute to the kits.

Table 1. Assessment Areas

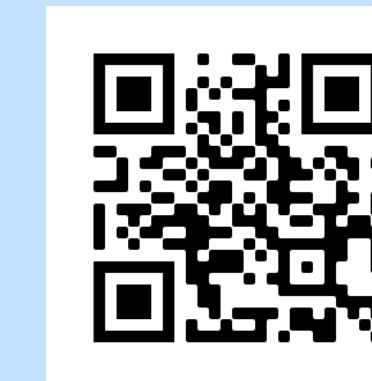
Demographics	Acceptability of and Willingness to Pay for Meal Kits
Physical Health	Diet Quality
Social and Emotional Health	Food Purchasing Habits
Eating and Family Mealtime Behaviors	Qualitative Effects of the Meal Kits



Figure 3. Green onions grown by HS Agriscience Program in Hawthorne, FL (Alachua).



Figure 4. Meal kit assembled by HS Culinary Arts Program in Gainesville, FL (Alachua).



Scan to view  
recipe cards



Scan to view  
recipe videos

## Considerations

Community stakeholder input was critical to meal kit program development. In addition to increasing access to healthy foods, meal kits can also help reduce food waste, and by extension the food waste carbon footprint. To have a greater impact, meal kit services should employ sustainable packaging and deliver multiple kits in one trip<sup>[8]</sup>. Meal kits may also help decrease the number of trips to the grocery store, adding to the benefit<sup>[8]</sup>. Further research is needed to determine the carbon output of a sustainably produced meal kit service.

### References

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- [5] U.S. Department of Agriculture. (2010). Why should we care about food waste? <https://www.usda.gov/foodlossandwaste/why>
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