

# Creating a Mobile App to Boost Vegetable Consumption: Development, Field Testing, and Dissemination

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University of Southern California

Grant no. USDA: 2006-55215-16730



United States Department of Agriculture  
National Institute of Food and Agriculture



**250+ Food Banks**

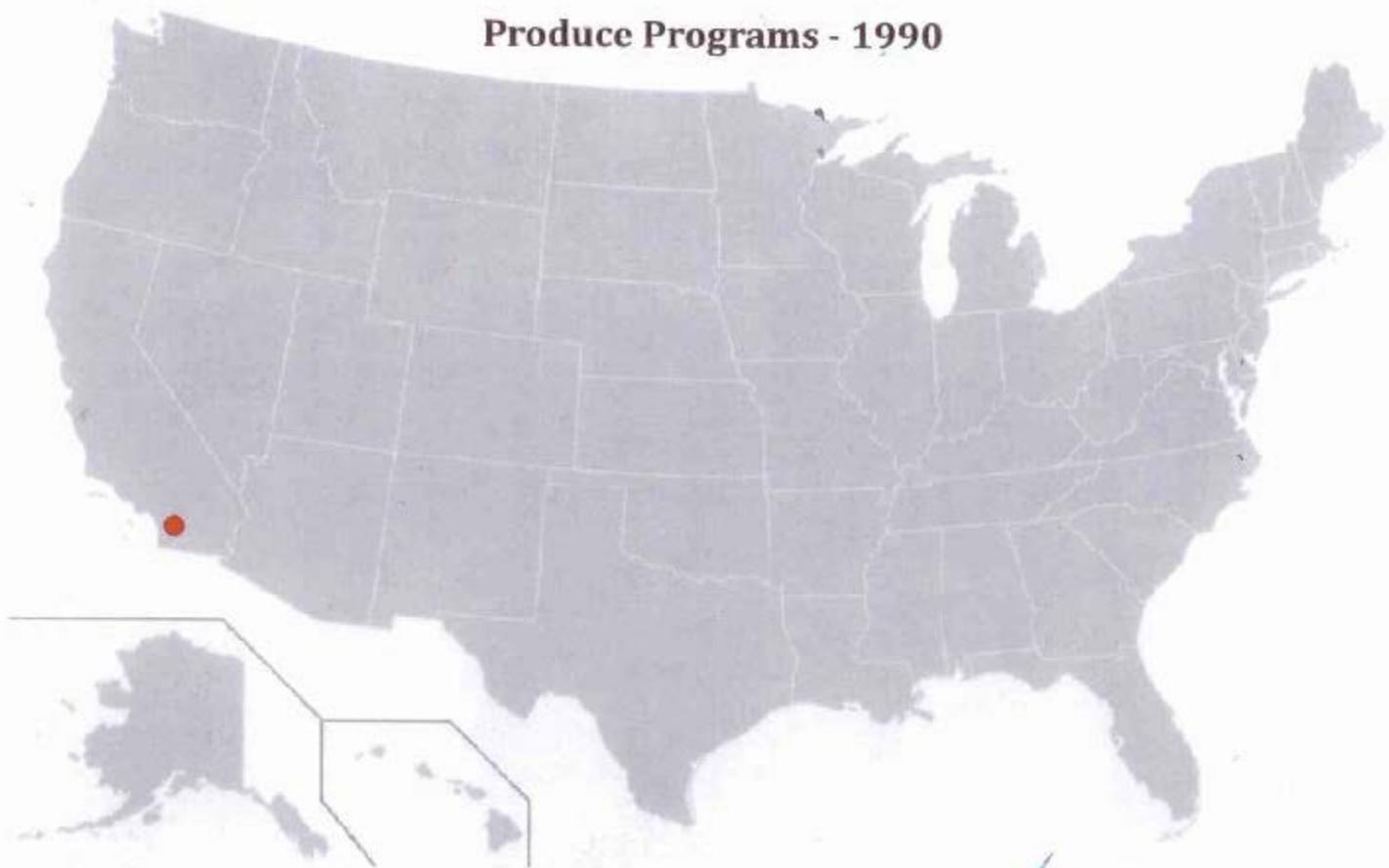


**36,000 Community Agencies,  
Including 26,000 Pantries**



**40+ Million Individual Recipients**

## Produce Programs - 1990



# Produce Programs - 2009



# Disseminating Orphan Innovations

The social sector invests a great deal of time and money trying to create social innovations, but pays scant attention to the challenges of spreading successful ones to other locations. Disseminating innovations takes a distinct, sophisticated skill set, one that often requires customizing the program to new circumstances, not replicating.

BY SUSAN H. EVANS & PETER CLARKE

*Illustration by Brett Ryder*



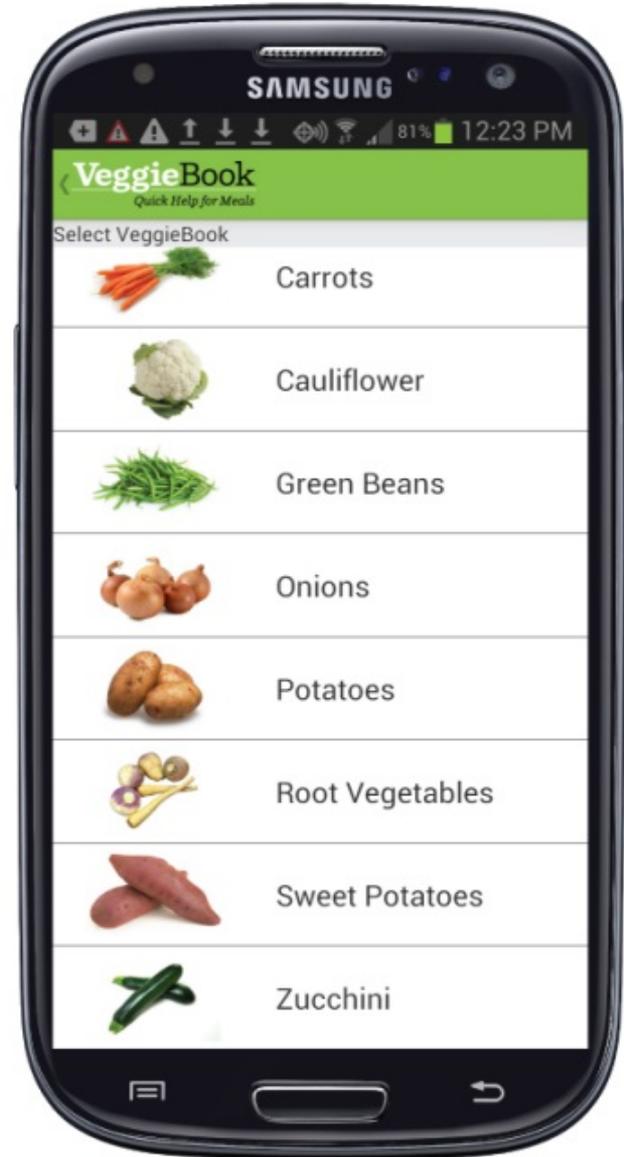






# VeggieBook

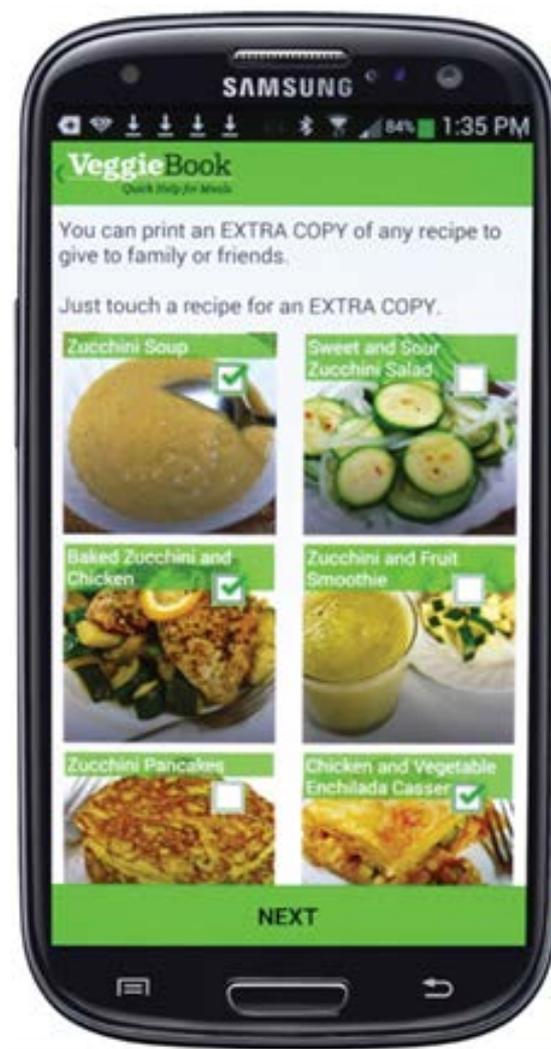
*Quick Help for Meals*



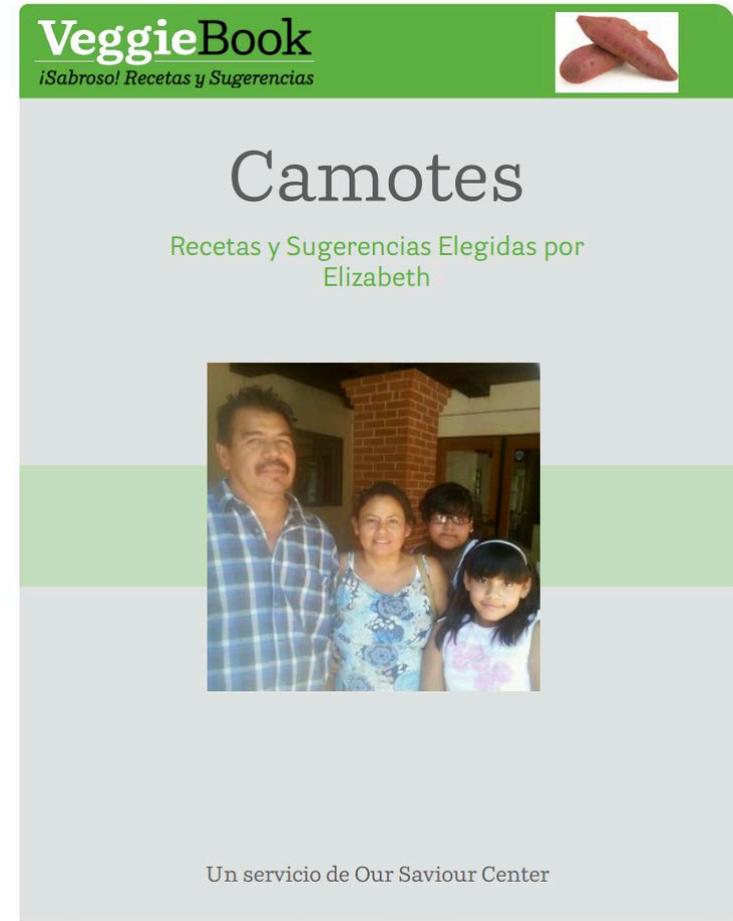
VeggieBook <small>Quick Help for Meals</small>	
Select VeggieBook	
	Carrots
	Cauliflower
	Green Beans
	Onions
	Potatoes
	Root Vegetables
	Sweet Potatoes
	Zucchini







# Clients' Customized Covers from Printed *VeggieBooks*



Kid Friendly

# Zucchini with Noodles



## Summary

Preparation Time:	10 minutes
Cooking Time:	20 minutes
Servings:	4-6
Can be made ahead:	Yes
Can be frozen:	Yes
Good for leftovers:	Yes

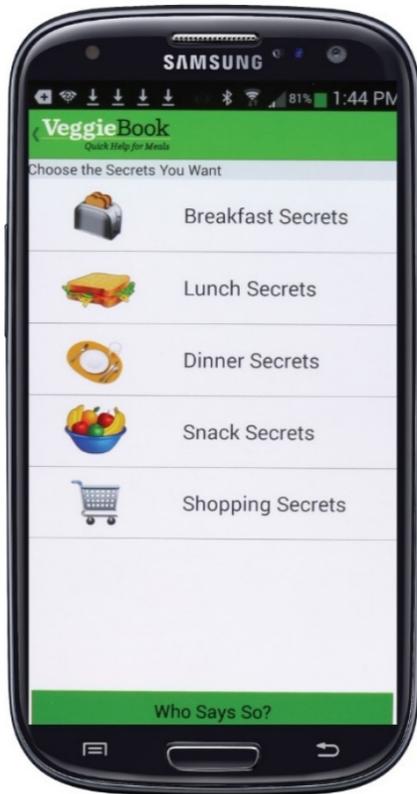
## Ingredients

- 1 package (12 ounce) noodles
- 3 zucchini, ends trimmed
- 2 cloves garlic, finely chopped (optional)
- 2 large spoons vegetable oil
- ½ of 14 ½ ounce can diced tomatoes, undrained
- salt and pepper, to taste
- ½ cup grated Parmesan cheese

## Instructions

1. Cut zucchini lengthwise. Then cut crosswise into pieces that are pencil-wide.
2. Cook noodles according to directions on the package.
3. While noodles are cooking, heat a frying pan. Add vegetable oil, garlic, and zucchini and cook until tender, about 10 minutes. Stir occasionally.
4. Add tomatoes, salt, and pepper to zucchini and stir.
5. Bring to a boil, reduce heat, and simmer for 5 minutes, stirring often.
6. Once the noodles are cooked, drain, and stir into the zucchini tomato mixture.
7. Top with cheese.

# SecretsBooks



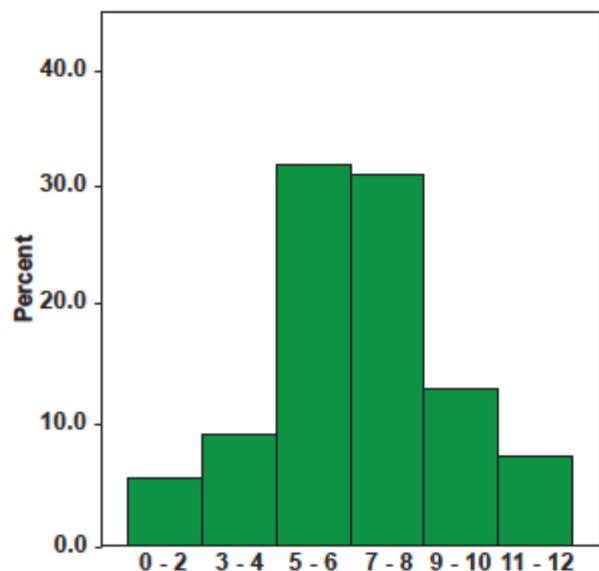


# “Nudges” in the App

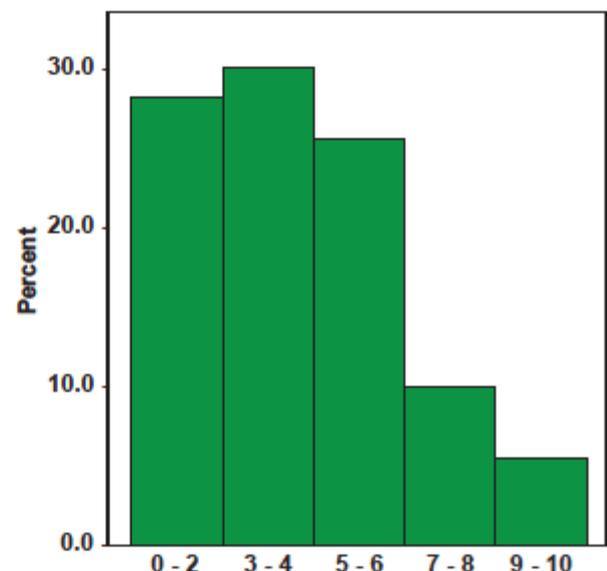
1. Invite users' choices to help compose the message
  - Customize the content to satisfy users' choices
  - Affirm that personalization has taken place
  - Decorate the message with treasured symbols
2. Engage users' social networks via sharing
3. Illustrate by showing the actions that are sought



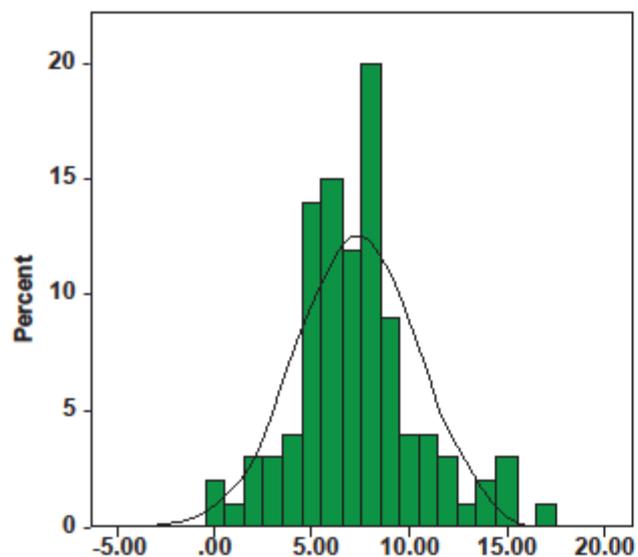
## Experimental Cooks' Use of *Quick Help For Meals*



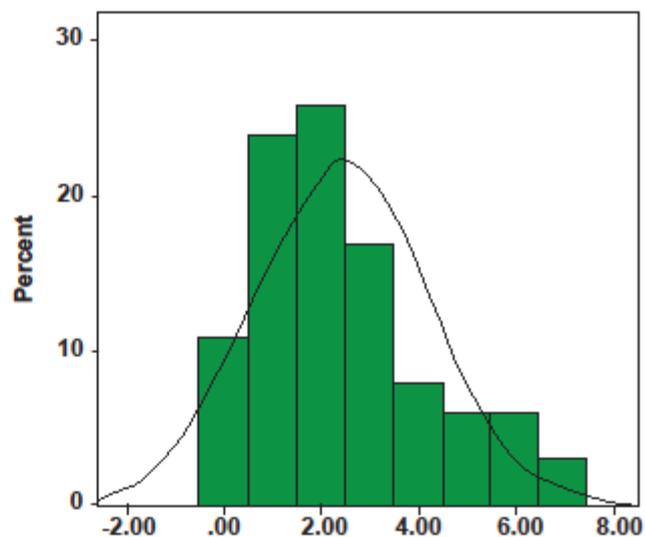
Cooks' Self Ratings of VeggieBook Use,  
Scale Values



Cooks' Self Ratings of SecretsBooks Use,  
Scale Values

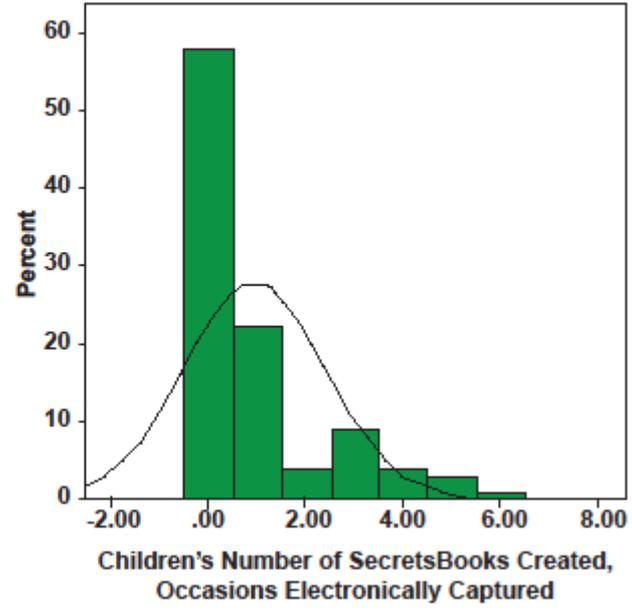
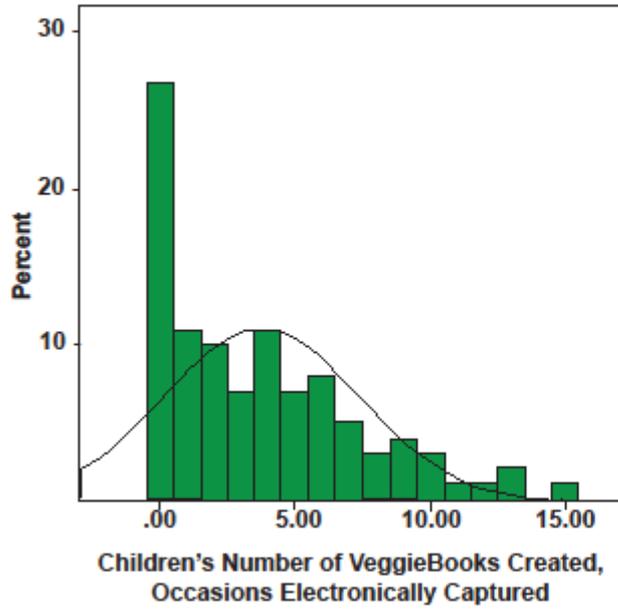


Cooks' Number of VeggieBooks Created,  
Occasions Electronically Captured

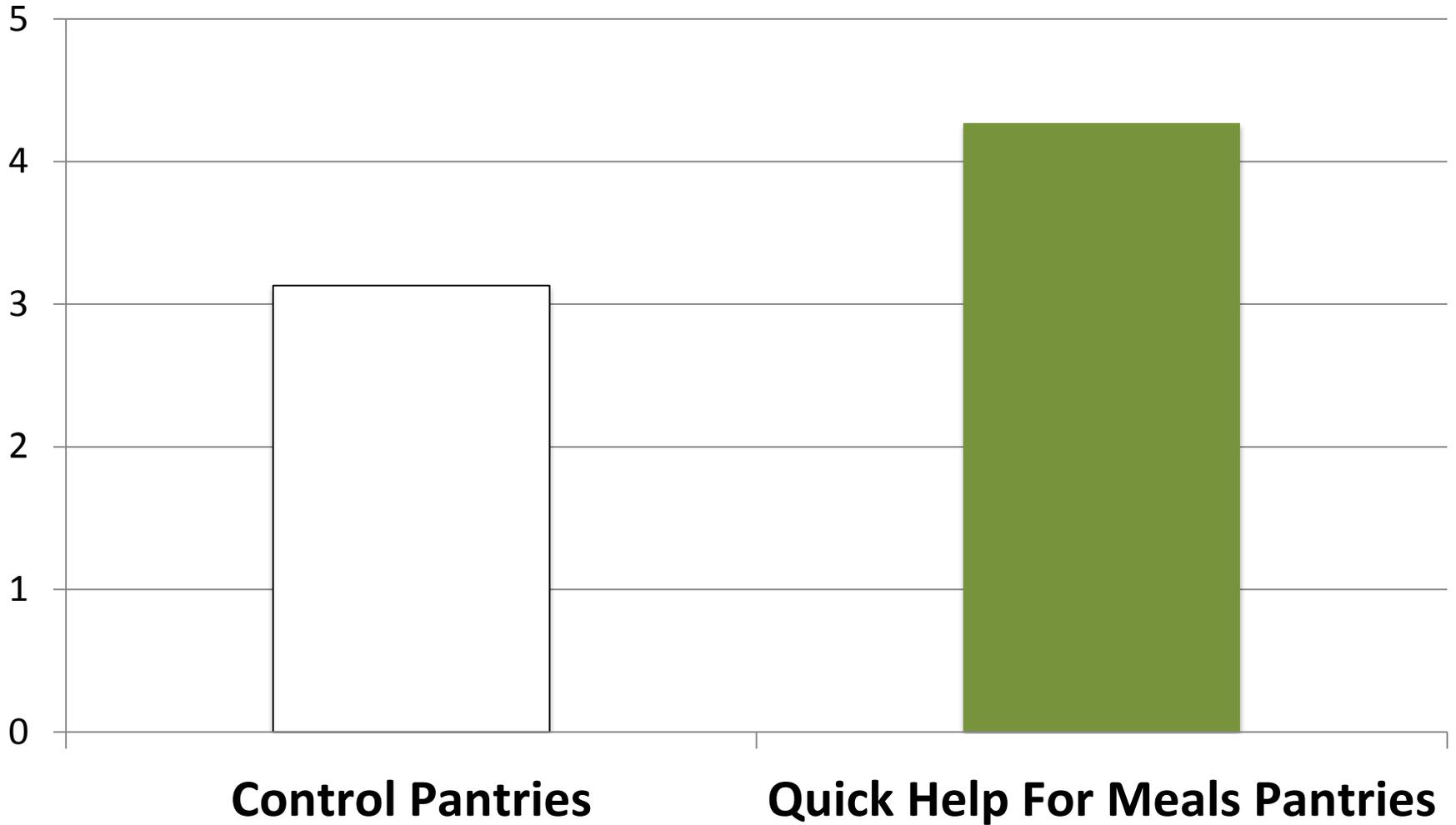


Cooks' Number of SecretsBooks Created,  
Occasions Electronically Captured

### Children's Use of Quick Help For Meals



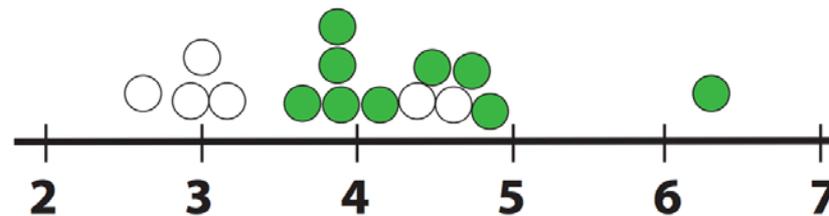
# Unique Vegetable Servings



**+38%**

## Average Number of Unique Preparations, by Pantries

○ = Control Pantries  
● = Quick Help for Meals Pantries



Control median = 3.03

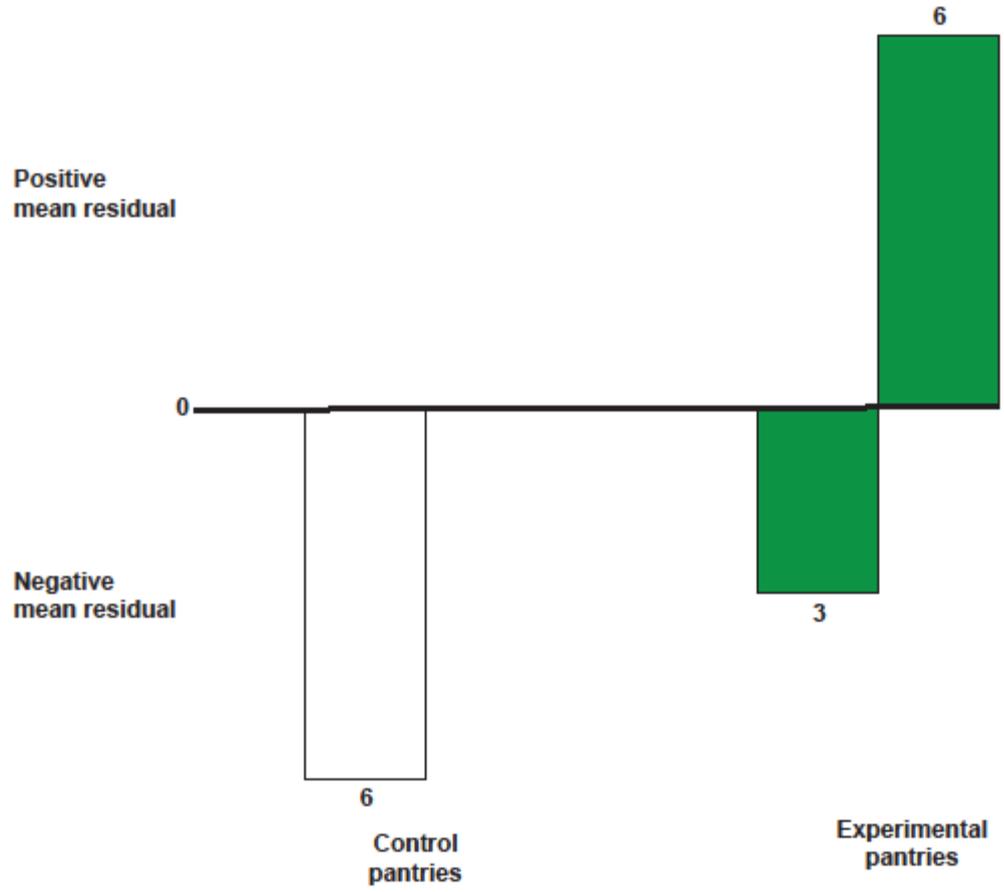
Quick Help for Meals median = 4.17

Mann-Whitney  $z=1.83$ ;  $p=.03$  (one-tailed)

# Conversations with Family Cooks at Weekly Pantry Distributions

	<u>Control Pantries</u>	<u>App Pantries</u>
Cooks say they are gaining confidence in the kitchen	4%	66%
Cooks mention that family is eating/enjoying vegetables more	1%	29%
Child involved in meal preparations	7%	39%

**Mean Residual Scores for Servings of 24 Vegetables,  
Baseline to End of Study  
(6 control and 9 experimental pantries)**



“VeggieBook helped me so much. One of the biggest things was the confidence it gave me to prepare food. Now, when I get something I don’t know from the pantry, I know I can find a way to use it.” -Imelda

“We’re eating dinner as a family and talking about our day.” -Georgette

“The sugar calculator helped us cut down on soft drinks.” -Priscilla

“I love the recipes. It helped get me back on track with my HbA1c. I’m eating healthy. Everyone should download the app.” -Tammy

“I knew he liked to make sandwiches but now he likes to cook with so many things! When we go to the grocery store he says mom, we should get this and that. I say Ok, sure because it’s healthy food. Before, all he wanted was junk food.” -Norma talking about her 11-year-old son

# Disseminating *Quick Help*



Make the most of mealtimes

Download the VeggieBook app NOW  
We'll help you

Aproveche al máximo  
las comidas

Descargar la aplicación VeggieBook  
Te ayudaremos



produce mobile



FRESH

CHICAGOFOODMILK.ORG  
#GoChicagoHappy

VOLUNTEER

RGE  
BEST CITRUS

Get new, tasty recipes  
Download the VeggieBook app NOW  
We'll help you

Obtenga recetas  
nuevas y sabrosas

Descargar la aplicación VeggieBook  
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Aproveche al máximo  
las comidas

Descargar la aplicación VeggieBook  
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Broccoli Burritos

Cajun Shrimp and Rice

Burritos con Queso

Cajun Shrimp and Rice

Burritos con Queso

Cajun Shrimp and Rice



## **‘Triggers’ that Amplify *Quick Help***

- Availability of fresh vegetables
- Outreach by socially-supportive ambassadors
- Printing of *Quick Help*'s output
- Enlisting kids as well as household cooks

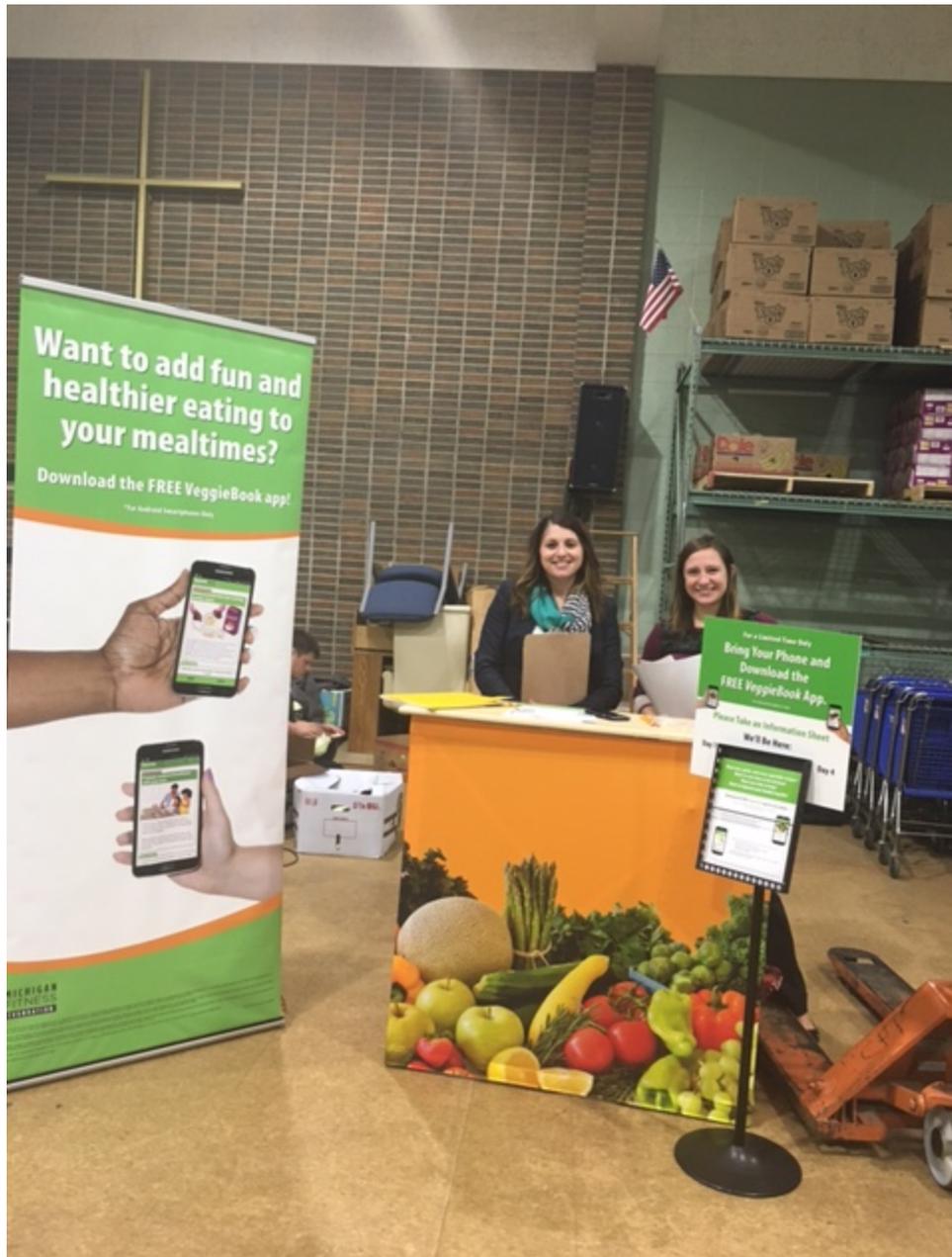
## **Outcomes of Interest**

- High rates of downloading the app
- Early and repeated use of VeggieBooks and/or SecretsBooks
- Healthy impacts on household preparations of meals and snacks
- Healthy impacts on household food behaviors

## **Potential Dissemination Partners**

- SNAP-Ed programs
- Food banks and their pantries
- School districts
- Associations of community health workers (Promotoras)
- Culinary training programs in high schools
- Grocery stores, small scale or supermarkets





Thank You

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