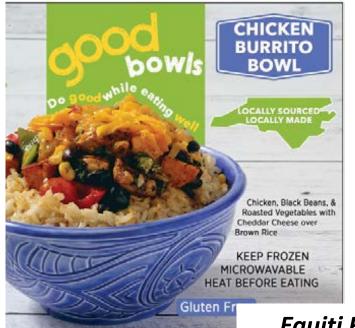


Appetite for Life:

# Promoting Sustainability with Good Bowls

Alice Ammerman DrPH
Mildred Kaufman Distinguished Professor,
Department of Nutrition, Gillings School of
Global Public Health
Director, Center for Health Promotion and
Disease Prevention
University of North Carolina at Chapel Hill







Equiti Foods makes and markets Good Bowls - locally sourced, healthy, frozen meals. With a focus on food equity, Good Bowls are sold, subsidized, and donated using a cost offset model to ensure everyone has access to



**Healthy Frozen Meals** 







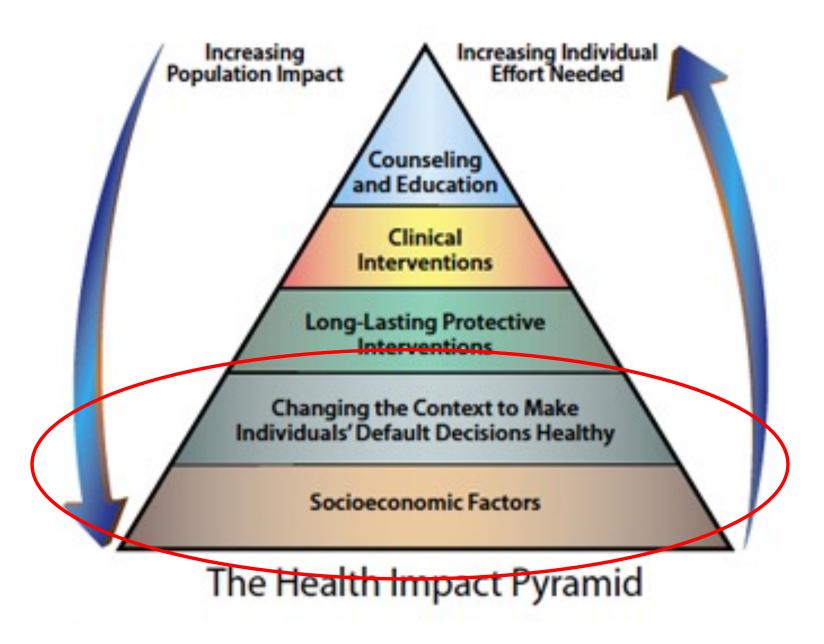
Founder
Equiti Foods LLC - Good Bowls
Now Volunteer Advisor



# THE PROBLEM – Food Insecurity and Lack of Economic Opportunity in Rural NC

- Historic discrimination against Black farmers
- Lack of Access to Healthy Food
- Rural Poverty
- High rates of diabetes, heart disease, and stroke
  - Food Waste





Thomas Frieden, Former Director of CDC

# **SOLUTION – Good Bowls -> Equiti Foods**

A healthy, frozen meal based on the Mediterranean Diet adapted to southern seasonal availability and taste preference ("Med-South")

#### **Locally Sourced**

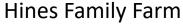
 Sourcing as many ingredients locally as possiblesupporting the local food system and helping to eliminate food waste using "cosmetically challenged" produce.

#### **Locally Made**

 Made in Hillsborough NC, supporting a local business and providing local jobs - keeping NC food in NC









# Mediterranean/Med-South Diet Basics

- Oil is good, especially (we think) olive oil "Use more than you think you should"
- Low fat is no longer the focus
- High quality fat/oil IS a primary focus
- Nuts of all kinds have high quality fat
  - Also fish (particularly cold water)
- And then the usual:
  - More fruits and vegetables
  - Whole vs. refined grains
  - Limit sugar
- And the secret to good nutrition.. Drum roll please



Roasted vegetables!

#### Journal of Critical Dietetics

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# The whiteness of the Mediterranean Diet: A historical, sociopolitical, and dietary analysis using Critical Race Theory

By Kate Gardner Burt, Lehman College, City University of New York, Bronx, NY

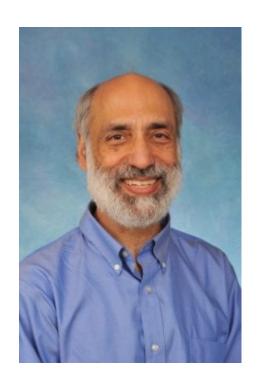




The evidence-based biologic principles of the Mediterranean Diet can be adapted to any culture

The "Med-South" Diet

# Mediterranean Diet goes South



Tom Keyserling



The researchers are affiliated with the University's Center for Health Promotion and Disease Prevention, which received grant funding that could total \$3.8 million over five years from the National Heart, Lung and Blood Institute to fund the research



Carmen Samuel-Hodge

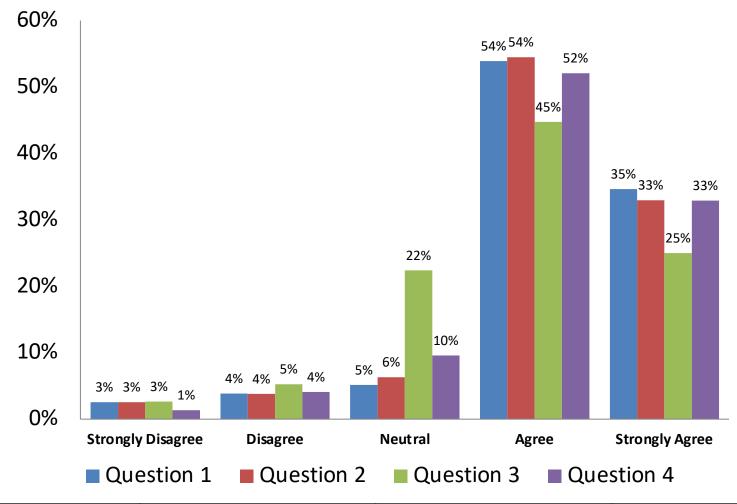
# It started with the Kinston BBQ Festival...







# **Overall Results**



Question 1	Question 2	Question 3	Question 4
The BBQ dish tasted good to me.	I would be willing to make this dish at home.	My family would enjoy a dish like this.	I would like more information.

#### RESEARCH ARTICLE

**Open Access** 



A community-based lifestyle and weight loss intervention promoting a Mediterranean-style diet pattern evaluated in the stroke belt of North Carolina: the Heart Healthy Lenoir Project

Thomas C. Keyserling<sup>1,2\*</sup>, Carmen D. Samuel-Hodge<sup>2,4</sup>, Stephanie Jilcott Pitts<sup>3</sup>, Beverly A. Garcia<sup>2</sup>, Larry F. Johnston<sup>2</sup>, Ziya Gizlice<sup>2</sup>, Cassandra L. Miller<sup>2</sup>, Danielle F. Braxton<sup>2,4</sup>, Kelly R. Evenson<sup>5</sup>, Janice C. Smith<sup>2</sup>, Gwen B. Davis<sup>2</sup>, Emmanuelle L. Quenum<sup>6</sup>, Nadya T. Majette Elliott<sup>7</sup>, Myron D. Gross<sup>8</sup>, Katrina E. Donahue<sup>9</sup>, Jacqueline R. Halladay<sup>9,10</sup> and Alice S. Ammerman<sup>2,4</sup>

**Conclusions**: The intervention yielded substantial improvement in diet, PA, and blood pressure, but weight loss was modest.









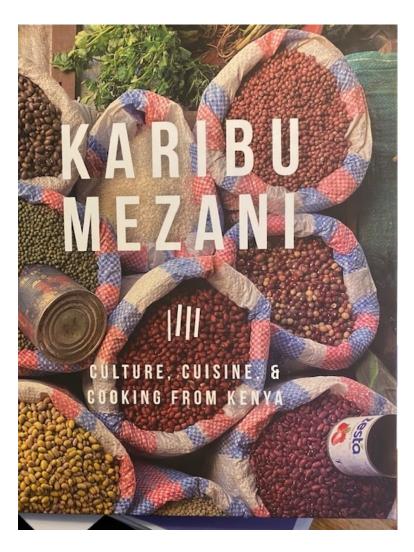
#### From The Well

# Hush puppies on a diet?

The Med-South diet study led by Carolina researchers will determine if healthier versions of traditional Southern dishes can help obese people lose weight and keep it off.



# **Cultural adaptation beyond the US**



#### THE MEDITERRANEAN-KENYAN DIET

The Mediterranean Diet is known to promote heart and brain health, prevent diabetes, and help prevent cancer. It emphasizes plant products (fruits, vegetables, nuts, and whole grains) over meat products, and it is also rich in healthy fats, which are found in vegetable oils, particularly olive oil, nuts, and fish. Interest in the Mediterranean Diet began growing during the 1960s, when it was noted that there were fewer deaths caused by coronary heart disease in Mediterranean rountries than in others.

so, what might a Med-Kenya dietary pattern look like that takes the principles of the Mediterranean plet and applies them to traditional Kenyan food? For starters, a Mediterranean style plate is primarily composed of fruits and vegetables such as tomatoes, sweet potatoes, pumpkin, and primarily composed selections, such as collards, spinach, and pumpkin leaves. Fruits, including bananas, pears, and mangoes, are great as snacks and desserts because they contain no added sugars and don't sacrifice taste for nutrition.

Whole grains and dairy products are to be consumed in somewhat smaller portions than those of fruits and vegetables. Whole grains include brown rice, red millet flower, and sorghum while dairy products include cheese or yogurt. Plant oils, especially olive oil, should be the primary source of fat in the Mediterranean Diet. Palm and coconut oil can be used as well but less often. Additionally, nuts and seeds serve as sources of healthy plant oil.

Finally, meat consumption, especially processed meat like bacon and sausage, should be more limited. It is recommended that you eat fish or poultry up to three or four times a week, and that you eat unprocessed red meat up to once or twice a week if desired. Use smaller amounts of meat for seasoning to stretch your food budget and make healthier meals. Beans are a great source of protein to eat with meat dishes or alone. Githeri, maharagwe, and ndengu are good examples of recipes.

Ugali is an important part of any Kenyan meal. Because it is made from refined corn flour, it is not as nutritious as whole grains and should be eaten in smaller amounts or mixed with whole grains like millet that provide more fiber and nutrients. The same is true with chapati. Some people mix in pumpkin or carrots to increase the nutritional value.

The most important thing to avoid on the Med-Kenya diet is extra sugar. Sugar can make you hungrier, and too much sugar leads to weight gain and potentially diabetes. The easiest way to avoid sugar is with what you choose to drink. Avoid soda and very sweet tea. Try ice cold wate instead, or tea/coffee with milk and just a little sugar. For sweet treats like mandazi, try adding fruit for good flavor and nutrition, and then you will need less sugar to get the sweet taste.

#### **UGALI**

- 2 cups water
- 1 ½ cups white cornmeal

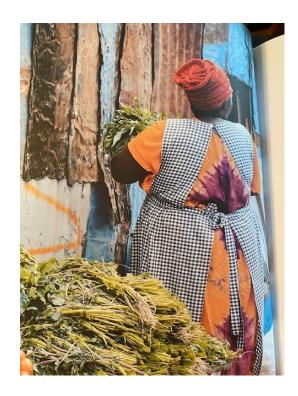
#### Nutrition call out - white cornmeal

Cornmeal contains some folate and iron but it is not as nutritious as the foods normally served with it. For best nutritional value, use a small serving of Ugali and larger amounts of vegetables, meats/fish, and sauces



#### **SUKUMA WIKI**

- Collard greens
- Tomatoes
- Onion
- Cooking oil
- Salt to taste



#### Nutrition call out - collard greens

Collard greens are packed with good nutrition, especially vitamins K, A, and C, and also have a lot of fiber. They also add nice color to many dishes and can be added in small amounts to almost any dish.

#### **Fruit Mandazi**



1 ½ cup cake flour

¼ tsp. salt

½ tsp. baking powder

¼ - ½ tsp. nutmeg or cinnamon

1 ½ Tbsp butter – could use oil

2 Tbsp sugar

1 large egg

1/4-1/2 tsp. vanilla extract

¼ cup buttermilk

1 cup of chopped fruit (bananas, mango, pears) – roughly pea-sized or slightly larger

#### **SOLUTION – Good Bowls**

#### **Dual Price Point Model- BOGO variation**

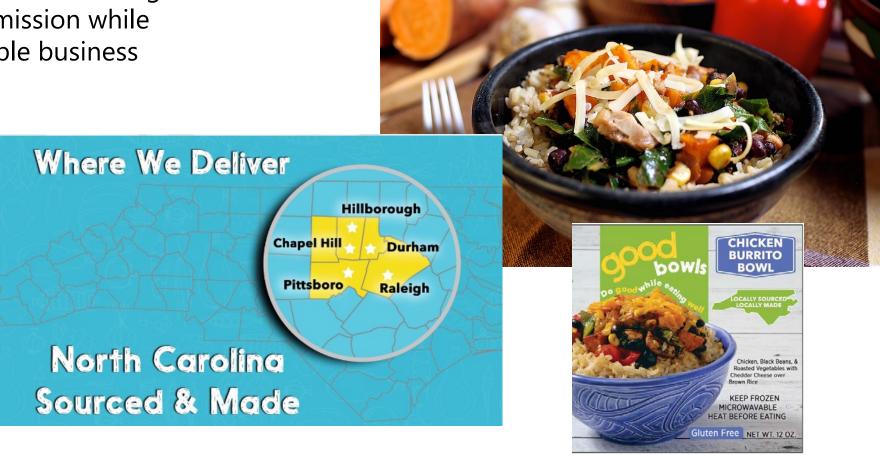
 Moves resources across the wealth gradient to accomplish our social mission while maintaining a sustainable business

#### **Higher End Market**

- Direct to Consumer on-line ordering
- Retail
- Coffee Shops

#### **Middle Market**

College Campuses



### **Higher End Markets**



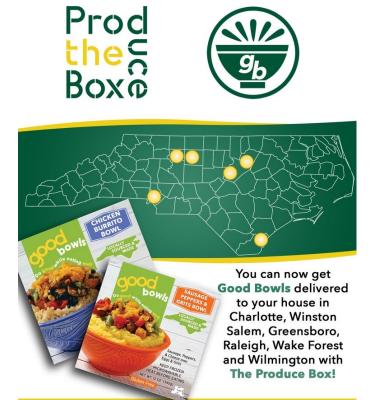






Grocery & Cafe







UNC Health Advanced Care at Home





# Rams Market

Chase Hall

# Beach Grille

Brinkhous-Bullitt Building: The Beach Cafe

#### Corner Café

Located on the ground floor of the N.C. Children's Hospital (down the hallway past the kinetic sculpture), the Corner Café offers a variety of dining options.

The Corner Café is open Monday through Friday from 11:00 AM- 2:00 PM.

Late Night Meals are available daily from 11:00 PM- 2:00 AM.



#### **UNC Health Advanced Care at Home**

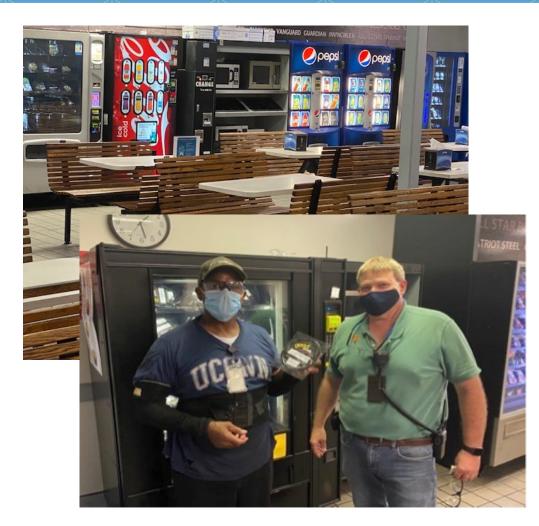
Our Advanced Care at Home program allows you to receive high-quality, acute-level care and to recover where you are most comfortable – in your home. Your medical needs are observed and addressed with 24/7 virtual monitoring, along with scheduled and rapid response in-person care, through a coordinated ecosystem of support services managed by the Advanced Care at Home team.





#### **SOLUTION – Subsidized Market**

- Blue Collar Worksites
  - Retrofitted ice cream vending machines
  - Return on investment for employers
  - Foundation of worksite wellness program
- Federal Food Program Reimbursement
  - SNAP Eligible
  - Medicaid NC Healthy Opportunities Pilots
- Medically Tailored Meals
  - Potential to reduce hospital readmission and reduce health care costs
- Pay it forward model



A Good Bowl from the Penco Factory vending machine \$4.50/bowl

# Good Bowls and Healthy Opportunity Pilot Program Medicaid Transformation -> Food is Medicine



- Provide participants with a box of
   14 healthy frozen meals each week
- Medically tailored meal capacity
- Delivered through distribution team using freezer vehicle



# Wake Heat and Eat

Food is Medicine: It's Not Just a Meal, It's a Connection



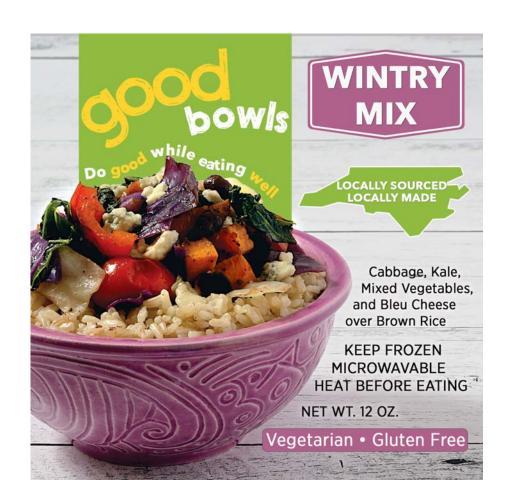
Good Bowls is partnering with the <u>UNC Assertive Community Treatment</u> (ACT) Program for the Wake Heat and Eat Program. This program provides healthy Good Bowls for mental health clinicians to bring along on patient visits in the community.

In addition to providing a healthy meal, the Heat and Eat program **provides a connection** and makes it easier for the ACT Team to engage patients that may be difficult to reach. Many of the patients are **experiencing food insecurity**, so nutritious Good Bowls meals not only meet that need, but help to build trust between the ACT Team and patients.

# REDUCING FOOD WASTE & INCREASING MARKETS FOR FARMERS

Seasonal gluts and harder to use winter produce

Adapting recipes to the seasons and helping farmers sell their seasonal excess and "cosmetically challenged" product – often wasted







#### our farmers

Our farmers are guided by a passion for growing and harvesting the absolute best for you. Practiced, patient, and brilliant, they are always working hard to deliver what Mother Nature intended.









# Pay it Forward Program





#### The Fall Good Bowls Pay-It-Forward campaign with PBO Eats! and Angelina's Kitchen has begun!

The mission at Good Bowls is to promote food equity in the community. The Pay-It-Forward campaign is our initiative to help food insecure families have access to healthy food, especially in these challenging times. **Donate a meal** or more online today and help us in our goal of raising at least 100 meals!



David Yates from the Good Bowls volunteer crew getting meals ready on Bowl Production Day.



Tych Cowdin and his team at Communities in **Schools Chatham County** with a Stack of meals from the January 2022 Pay-It-Forward Campaign

Total over 2,000 bowls and \$10,000 to local restaurants

Good Bowls and Pittsboro Eats have now teamed up with the newly formed <a href="Chatham Alliance">Chatham Alliance</a> to create the Community Harvest program.

Four times per year, collect donations from people and businesses in the community and then a group of volunteers prepares healthy meals in a local commercial kitchen.

Meals are distributed to families in the community through our various partners – CIS Chatham County, CORA Food Pantry, and Chatham Chuckwagon.





## **KEY TO THE SOLUTION**

Partnering with and promoting local farms, businesses, and nonprofits to increase access to healthy food



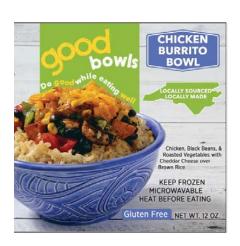


**Small Business Technology Transfer Grant:** 

"Good Bowls: Empowering Communities to Achieve Good Food Access and Health Equity"

Phase I: Proof of concept

**Phase II**: Commercialization and testing impact in blue collar worksites

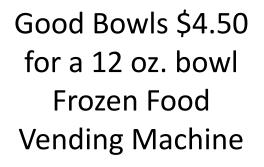




The Lunchroom – only food in the plant for 160 workers. Average "meal" cost \$7.50









#### Chicken Burrito Bowl

Full of flavorful healthy ingredients with a hint of spice! Including marinated chicken breast, cheddar cheese, black beans, and sweet potato

#### Vegetable Chicken Curry Bowl

Our savory bowl is filled with sweet coconut flavors with spicy twist. Containing peas, cauliflower, zucchini, and brown rice!



#### Sausage and Grits Bowls

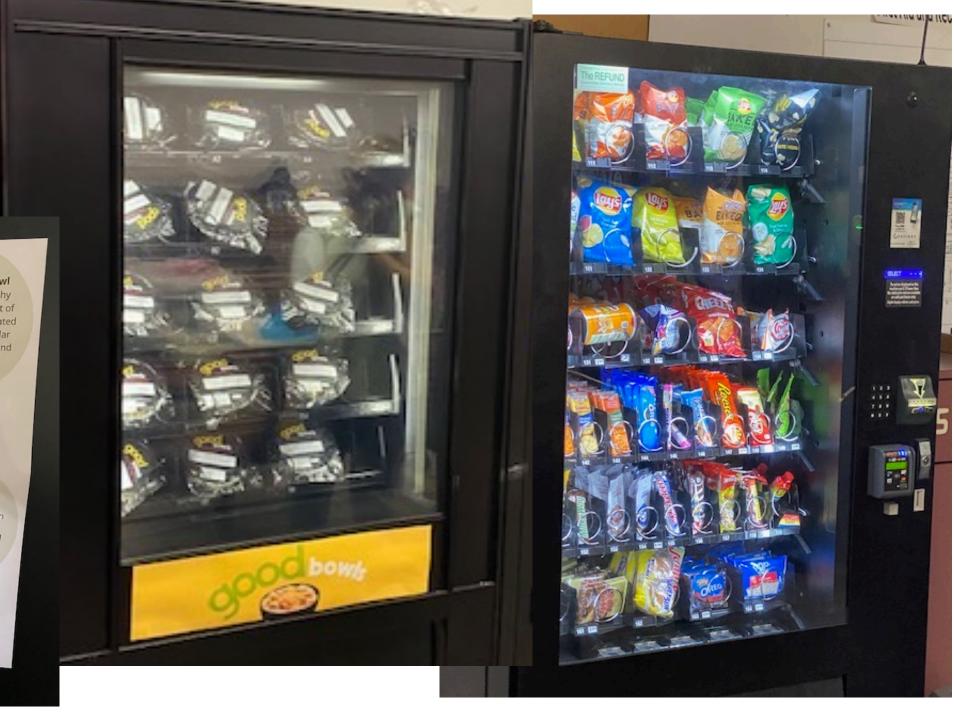
Our classic breakfast themed bowl loaded with pork sausage, cheddar cheese, red peppers, and sweet potato this bowl will keep you satisfied all day!



#### Vegetable and Chickpea Curry Bowl

Same recipe as our chicken bowl, but now vegan and vegetarian friendly! Now adding chickpeas for protein, still just as flavorful!







## Some internet challenges with swipe options but generally well received





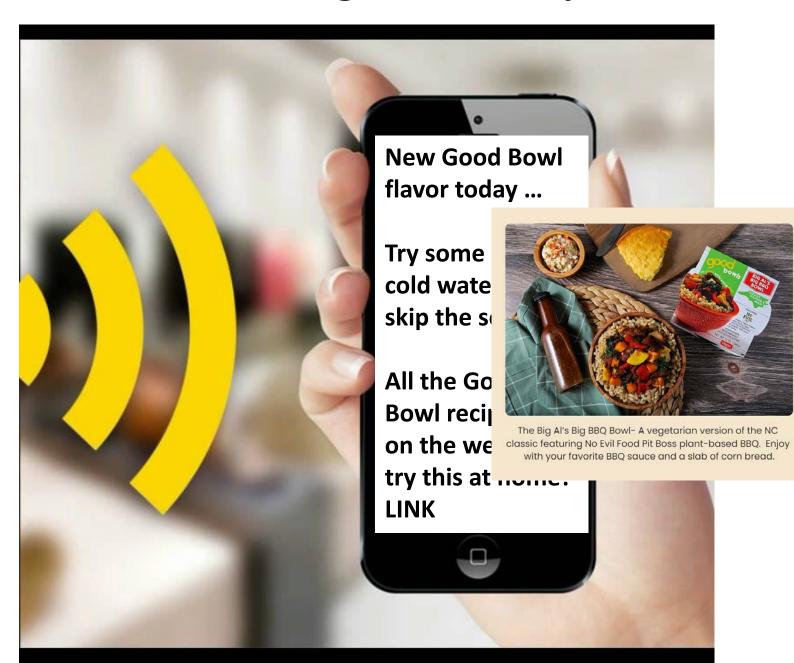
## **Implementation Pilot**

- New packaging and flavors
- Testing vending machine and bowl flavor preferences
- Will test AI Ap and beacon system





## Text messages to smart phones



### **Ingredients - Serves 4**

Small white onion - diced Zucchini cut into half moons ½ Red Pepper diced Sweet Potato diced Dino Kale - 3oz Garlic - 4 cloves minced ½ Jalapeño minced

No Evil Pit Boss BBQ - 6 oz Barley - 1 cup dry Olive Oil - 4 tbsp on veggies 2 tbsp in frying pan

1 lime Salt - ½ tsp Margarine 1.5 tbsp Eastern NC vinegar based BBQ sauce - 1/3 cup



# Local Food Promotion Program - USDA

Assisting local farmers with finding markets for

- "Cosmetically challenged" food
- Seasonal excess

Fits well with Equiti Foods model:

- Reduce food waste
- Lower food costs
- Support local farmers

# Sustainability Impacts

- Sourcing from local farmers as much as possible
  - Transportation Aggregation
- Using seasonally/regionally tailored recipes (sweet potatoes, peppers, greens)
- Limited beef and pork
- Packaging ongoing challenge
- Using Grade B "cosmetically challenged" produce
- Minimal (vs "ultra") processing



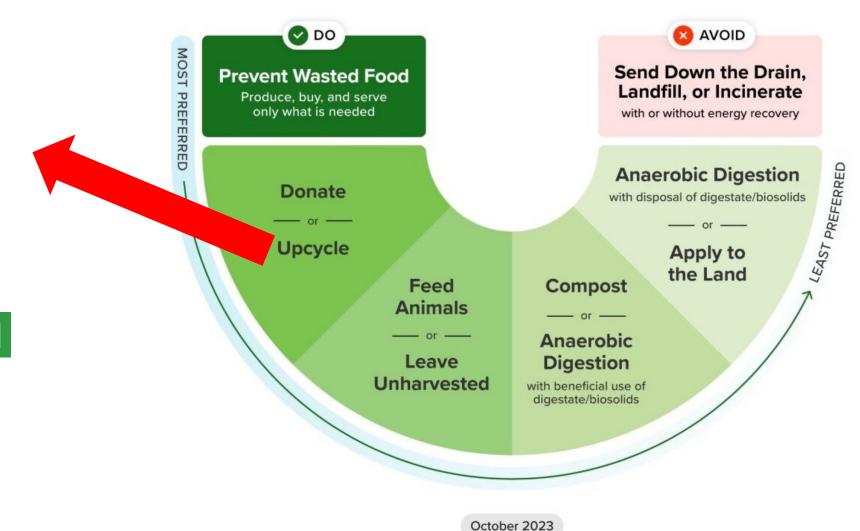


"Upcycled foods use ingredients that otherwise would not have gone to human consumption, are procured and produced using *verifiable supply* chains, and have a positive impact on the environment."



## **Wasted Food Scale**

How to reduce the environmental impacts of wasted food















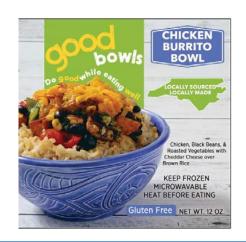




- Protecting the social mission while maintaining a viable business
- Balancing adequate return for local farmers using sustainable practices with affordable price for consumers
- Accommodating diverse cultural preferences/economic status
- Help others build capacity without losing market opportunities
- Navigating conflict of interest at the university
- Trying to solve too many problems at once -> spread too thin
- Choosing between equity investment vs. "bootstrapping"

# Maybe a better BOGO model?





	Original Tom's Shoes	Good Bowls
Provides a needed product to disadvantaged populations		
<b>Builds on Altruistic Spirit</b>		
Transfers wealth		
Supports local businesses	<b>X?</b>	
Builds capacity	X?	
Encourages local entrepreneurship	<b>X?</b>	



Med-South Healthy Recipes

Locally Source Ingredients

Grade B and Excess Produce to Reduce Food Waste

Produced in Local Co-op

Commercial Kitchen

Community
Stakeholder Engagement

**EQUITI FOODS** 

## The Good Bowls Mission

Good food is the essence of good health and well-being. Everyone deserves access to healthy, good-tasting, and affordable food. At the same time, the farmers that produce our food are struggling to make a sustainable living. That's why we created Good Bowls.



• NIH STTR (Small Business Technology Transfer) Grants

• USDA LFPP (Local Food Promotion Program) Grant

 North Carolina Healthy Opportunities Pilot Capacity Building Funding Medicaid At-Risk Recipients

Hospital At-Home Patients - UNC Health

Blue Collar Worksites - Vending Machines

Pay-It-Forward Volunteer Made Meals to Charities

Direct to Consumer at Home - Produce Box & Hungry Harvest

Retail -Local Co-ops