

# RESEARCH INFO SOCIAL

International Medical Outreach



*The Perception, Usage, and Knowledge of  
Moringa Oleifera in Mare-Brignol, Haiti  
after Increased Education and Access*

## HOW DID THE PROJECT START?

- In 2011, IMO took on Mare-Brignol, Haiti as a Permanent Project.
- With assistance from local Haitian health professionals, IMO identified three obstacles to health security:
  - limited access to healthcare
  - economic disparity
  - inconsistent access to food
- In an attempt to combat these conditions, the IMO Moringa Project was implemented in 2013.



# WHAT IS *MORINGA OLEIFERA*?

- Extremely nutritious superfood!
  - Contains high concentrations of vitamins and minerals
- Vitamin A
  - 4x the amount of carrots
- Vitamin C
  - 7x the amount of oranges
- Vitamin E
  - 3x the amount of spinach
- Calcium
  - 4x the amount of milk
- Protein
  - 2x the amount of milk
- Potassium
  - 3x the amount of bananas
- Fiber
  - 3x the amount of almonds





## Other Benefits of Moringa

- Anticancer
- Anti-inflammatory
- Antibacterial
- Antiviral
- Antifungal
- Antisickling
- Anthelmintic properties
- Protects against stomach ulcers
- Helps lower cholesterol
- Promotes wound healing
- Filters water
- Potential cash-crop



### Also Called

- Drumstick Tree
- Horseradish Tree
- Ben Oil Tree or Benzoin Tree
- Miracle Tree



## External Moringa Research

- Although there is extensive research on the implementation of *M. oleifera* in Africa, there is limited work on the usage and perception of *M. oleifera* in Haiti.
- Various grass-root organizations in Haiti have worked to promote and establish *M. oleifera* as a potential dietary source and cash-crop, but qualitative and quantitative data on its impact in Haiti is limited.



## WHAT ARE WE TRYING TO ACCOMPLISH?

The aim of this study is to measure changes in perception, usage, and knowledge of *Moringa oleifera* in the community of Mare-Brignol with education and supplementation of the product. A series of interactive workshops, informational house-to-house visits, and a three-month supply of dried *M. oleifera* powder for each eligible household member will be supplied. Participants will be given a preliminary survey questionnaire to determine their baseline perception, utilization, and knowledge of *M. oleifera* followed by a post survey after three months. It is hypothesized that these actions will enhance the community's knowledge, perception, and utilization of *M. oleifera*. The adoption of the plant could lead to enhanced nutrition and the formation of a possible micro-economy in Mare-Brignol, Haiti.

## Pre-Trip Itinerary

Saturday, August 17th - Thursday, August 22nd  
(2019)



Day 1 - Travel

Day 2 - Meet n' Greet

Day 3 - Survey

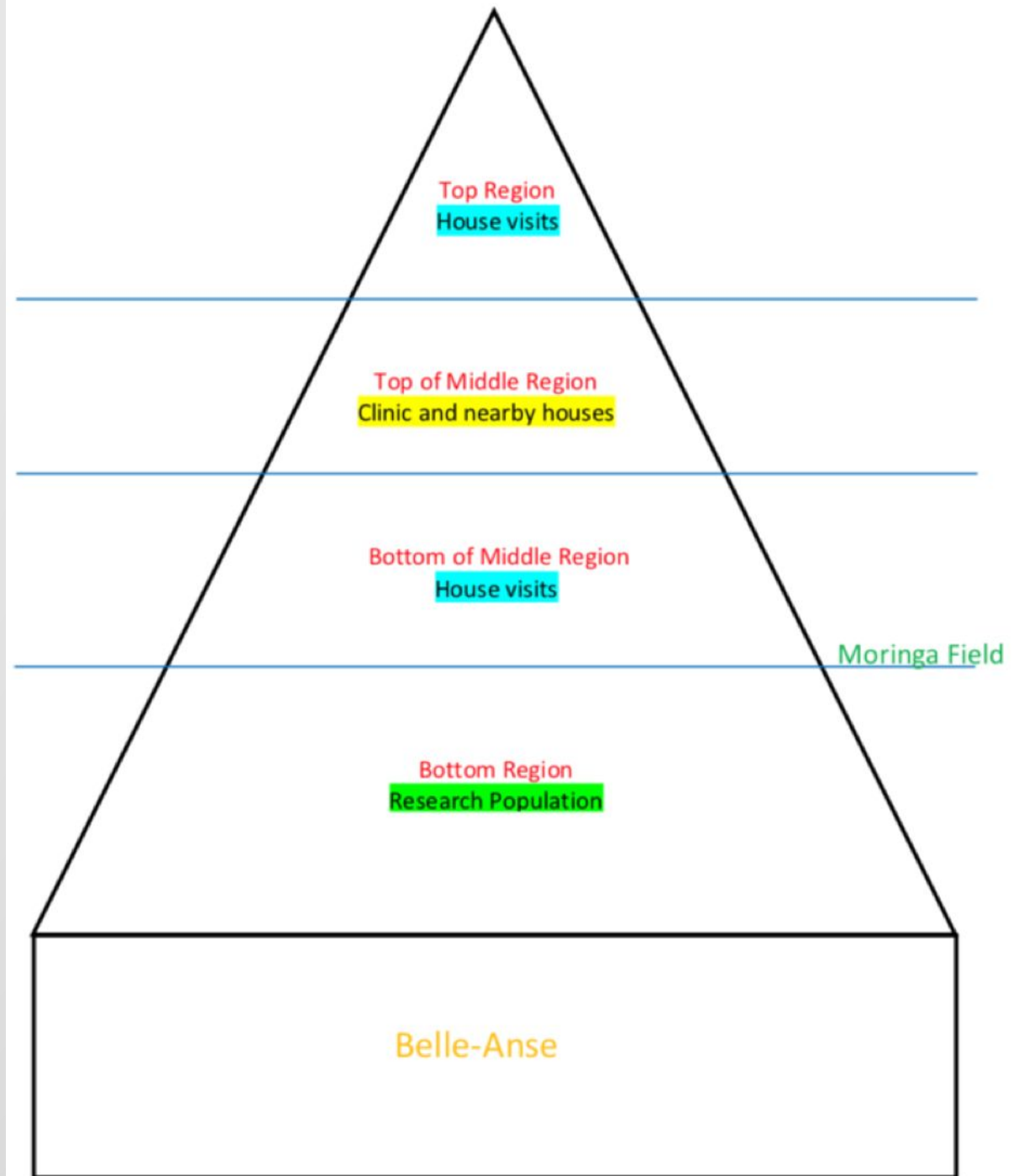
Day 4 - Survey

Day 5 - Workshop

Day 6 - Travel



## Haiti Mountain Division





## PRE TRIP

- A section of 22 houses in *Mare Brignol* were selected for a pre-survey questionnaire
  - 35 participants
- Each participant received a 3 month supply of *Moringa*
- We hosted a community workshop on *Moringa*

## House and Participant Tracking

### House Tracking

- Gaia GPS app
  - Take pictures and add labeled pins
- GoPro video recording
  - Show our way through the houses
- Houses were assigned a number (e.g. H7)

### Participant Tracking

- Participants were assigned a letter representing their position in the household (e.g. M for mother)
- Consent forms contained participant label and house number
  - A copy was provided to participants

## PRE-TRIP (cont.)

- “ A preliminary survey will be performed to evaluate health and agricultural perceptions and knowledge, as well as consumption, of *Moringa oleifera* among 20 families in the village of Mare-Brignol, Haiti. The preliminary survey is given to consented, adult members of the household and addresses the following three topics: 1) perceived health and agricultural benefits, 2) knowledge of benefits and uses of *M. oleifera*, and 3) degree of implementation into daily diet and/or lifestyle.”
- Prospective participants had been thoroughly informed on the research study before signed consent was acquired and their entry into the research was granted.
- No names, addresses, or identifying data were collected for this research study. Each house was assigned a number and the participants were assigned a letter representing their position in the household for confidentiality.

### Pre-Survey: (K) Knowledge - (P) Perception - (U) Usage:

K1. Have you heard about the plant Moringa?

- a. Yes
- b. No

P2. Do you think you could benefit from the use of Moringa?

- a. Yes
- b. I don't know
- c. No

U3. How often do you use Moringa?

- a. Never
- b. Less than one time per week
- c. 1-2 times per week
- d. 3-4 times per week
- e. 5 or more times per week

K4. Have you heard that Moringa can be used for personal hygiene?

- a. Yes
- b. No

P5. Do you believe that Moringa would benefit your personal hygiene?

- a. Yes
- b. I don't know
- c. No

U6. How often do you use Moringa for personal hygiene?

- a. Never
- b. Less than one time per week
- c. 1-2 times per week
- d. 3-4 times per week
- e. 5 or more times per week

K7. Have you heard that you can grow Moringa?

- a. Yes
- b. No

P8. Do you think you and your family could benefit from growing Moringa?

- a. Yes
- b. I don't know
- c. No



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## Survey Subcategories

1. General
2. Personal Hygiene
3. Agriculture
4. Nutrition
5. Livestock
6. Energy
7. Water Purification
8. Exposure
9. Access
10. Children
11. Uses

## Inclusion and Exclusion

- Inclusion
  - Little to no history of consumption of *Moringa Oleifera*
  - Willing and able to commit to the three-month requirement for the study and attendance at the workshop
  - Must be at least 18 years of age
- Exclusion
  - Knowledge about moringa
  - Pregnant women or women who are nursing
  - Using of blood-thinning medication
  - Intention or use of the *M. oleifera* powder for purposes other than consumption

## After the Pre-Survey

- Immediately after the preliminary survey, the subjects were given 2 bags (0.6 lb each) of *M. Oleifera* powder obtained from *Kuli Kuli*, a trusted USDA Organic source.
  - The product was given in the original packaging.
  - It was given at the workshop (rather than during house visits) for incentive purposes.
- We advised participants to use two teaspoons each day.
- Subjects were also given materials with all the necessary information.

### PRODUCT BENEFITS

- ✓ 21 servings per bag
- ✓ One tbsp (10g) is equal to two cups of leafy greens
- ✓ Multivitamin in a leaf
- ✓ No artificial flavors
- ✓ Vegan and naturally gluten-free
- ✓ Non-GMO



### FACTS

Serving Size	10g
Calories	35
Total Fat	0.5g
Cholesterol	0mg
Sodium	0g
Potassium	160mg
Total Carbs	5g
Dietary Fiber	3g
Sugars	1g (0g added)
Protein	3g
Vitamin A	8% dv
Calcium	10% dv
Iron	10% dv
Magnesium	6%



## After the Pre-Survey Cont.

- A community workshop on the health and agricultural benefits of *M. Oleifera* took place on the day after the 2 days of preliminary surveys.
  - Organized by International Medical Outreach and local community leaders
- The International Medical Outreach research team marketed the community workshop from the start of the recruitment period up until the day of the workshop by spreading the word to community leaders.





# Pre-trip





# WHY IS EDUCATION IMPORTANT?

- By coupling the availability of Moringa with the education on its uses and benefits, we hope to increase the likelihood that the community will actually use it in their everyday lives.
- It is important to know how to cook it, and what it can be used for.





## POST TRIP

- A similar questionnaire to the pre-survey will be given with a few added questions related to the community workshop
- All data will be securely brought back to the states, and analyzed by the research team

## Post-Trip Itinerary



Day 1 - Travel

Day 2 - Meet n' Greet

Day 3 - Survey

Day 4 - Survey

Day 5 - Workshop

Day 6 - Travel



## Post Trip (cont.)

- Three months after the pre-survey and subsequent workshop, a post-survey will be performed at their home to reassess the perception, knowledge, and usage of *M. Oleifera* of the participants.
- Finally, data analysis!
  - Upon completion of the study, results will be shared with the community leaders and participants.



Post-Background Survey Household #: \_\_\_\_\_ Position in Family: \_\_\_\_\_

Did you attend the workshop in \_\_\_\_\_?

- a. Yes
- b. No

If you did not attend the workshop, why not? \_\_\_\_\_

If you did attend, did you find the workshop beneficial?

- c. Yes
- d. No

What would you change about the workshop?

What is your age? \_\_\_\_\_

Are you pregnant or think you may be pregnant? \_\_\_\_\_

Are you currently breastfeeding? \_\_\_\_\_

How many people live in this household? \_\_\_\_\_

How many solid meals do you have per day? \_\_\_\_\_

How many glasses of water do you drink per day? \_\_\_\_\_

Do you have livestock?

- e. Yes
- f. No

On average, how much money do you make a week? \_\_\_\_\_

On average, how much money do you spend a week on food? \_\_\_\_\_

# WHERE ARE WE AT NOW?

- Approval
  - Obtained approval from UCF IRB
  - Obtained approval from the Haitian Bioethics Committee in March 2019
- Currently working on:
  - Inputting data from preliminary surveys
  - Planning of IMO Winter Haiti workshop
  - Planning of Post-trip
  - Raising funds for research
    - Grants
    - Fundraising events
      - e.g. Ultimate Game Knight
    - Selling merchandise
      - e.g. Haiti Mugs



Why?





## HOW CAN YOU GET INVOLVED?

- Apply to be a research apprentice
- Attend Health Training
- Ask questions
- Come to our fundraising events
- Be involved in IMO!
- And of course, donate!



# RESEARCH APPRENTICESHIP

- Research Apprentice applications will be opening Monday, September 23rd!
  - They close Friday, September 27th by 5:00pm
  - Due at the cube in OSI or by email to [President@imoucf.org](mailto:President@imoucf.org)
- Attend weekly research meetings
- Work alongside the research team to plan our post trip
- Help plan educational workshops for the community of Mare Brignol
- Help raise money
- Work with SPSS to input data from previous trips



IMO research needs your help! The purpose of IMO's research is to create nutritional sustainability for the people of Mare-Brignol, Haiti by incorporating a highly nutritious plant, Moringa Oleifera, into their daily diets.



ANY  
QUESTIONS?



Thank You for  
coming!



## IMO Research Apprenticeship!



Have we sparked your interest?  
Do you feel the need to be a part of our  
research?

*Apply for a Research Apprenticeship position!*

- Shadow research directors
- Attend weekly research meetings
- Help plan educational workshops
- Help acquire funding
- Work with a team toward a common goal!

Applications open Monday, September 23<sup>rd</sup>  
and are due Friday, September 27<sup>th</sup> by 5:00pm  
via email to [president@imoucf.org](mailto:president@imoucf.org) or turn it  
into our OSI Cubicle!

Application can be found in our next email or  
on the website.