



The Agroecology Lab

Status Update:

# Turn the Tap

# What we are working on

## Objectives of our project

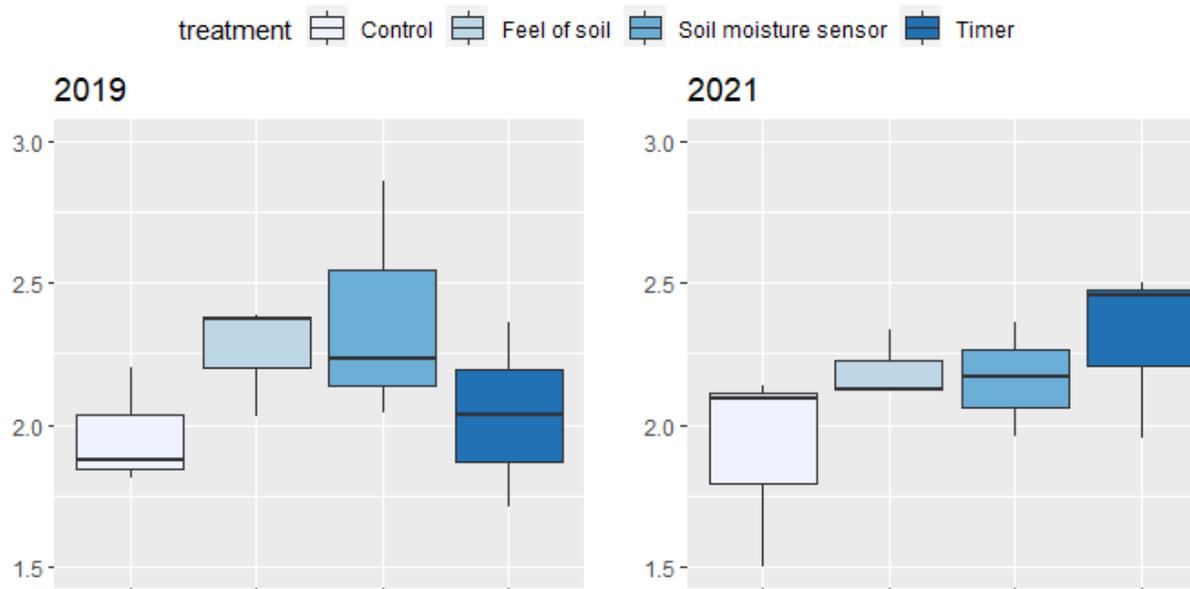
- We wanted to establish how effects of irrigation management styles of drip irrigation on crop yield and quality and nitrogen movement.
- Better understand the role of soil moisture monitoring systems could play in the

## Treatments

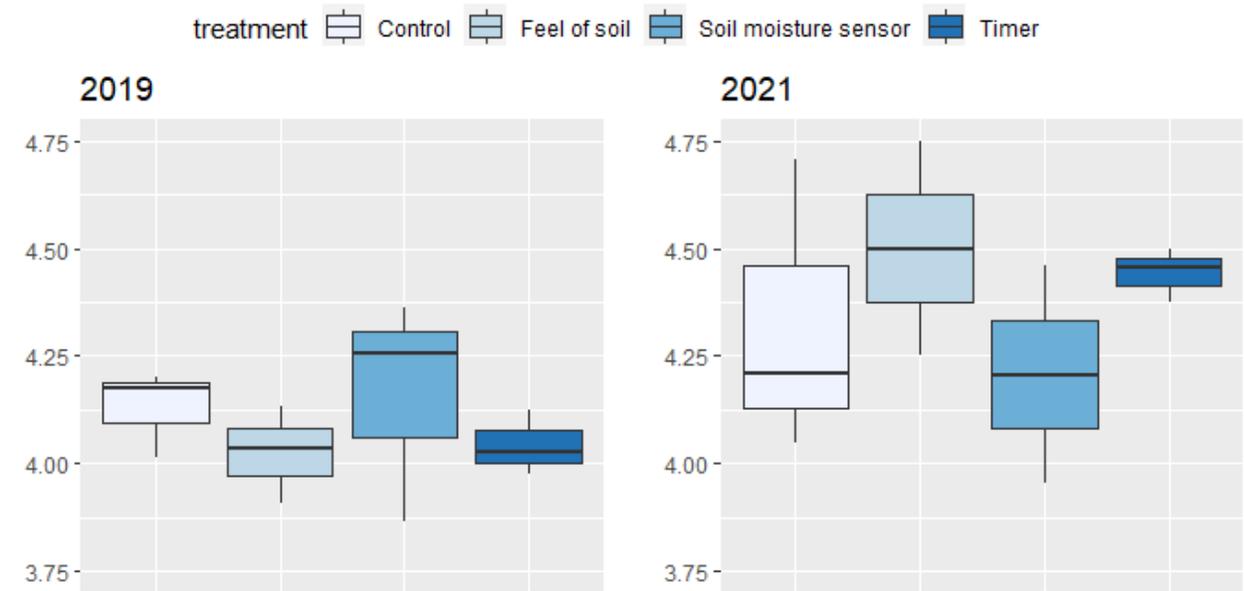
- 1.No irrigation
- 2.Feel of soil
- 3.Soil moisture sensors
- 4.Timer systems (daily irrigation)

# Quality

## Cucumber Defects



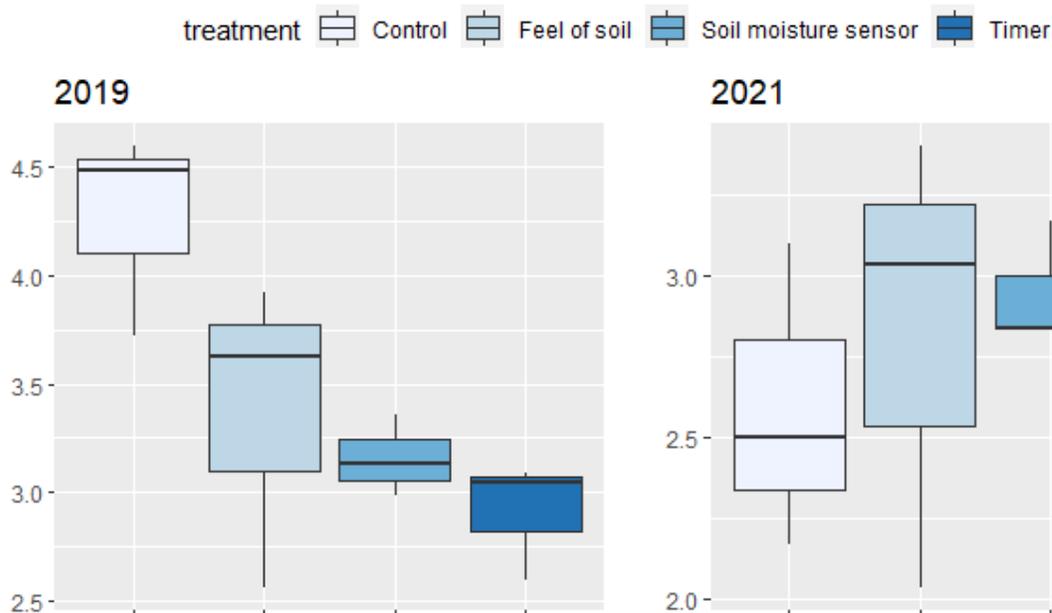
## Cucumber Firmness



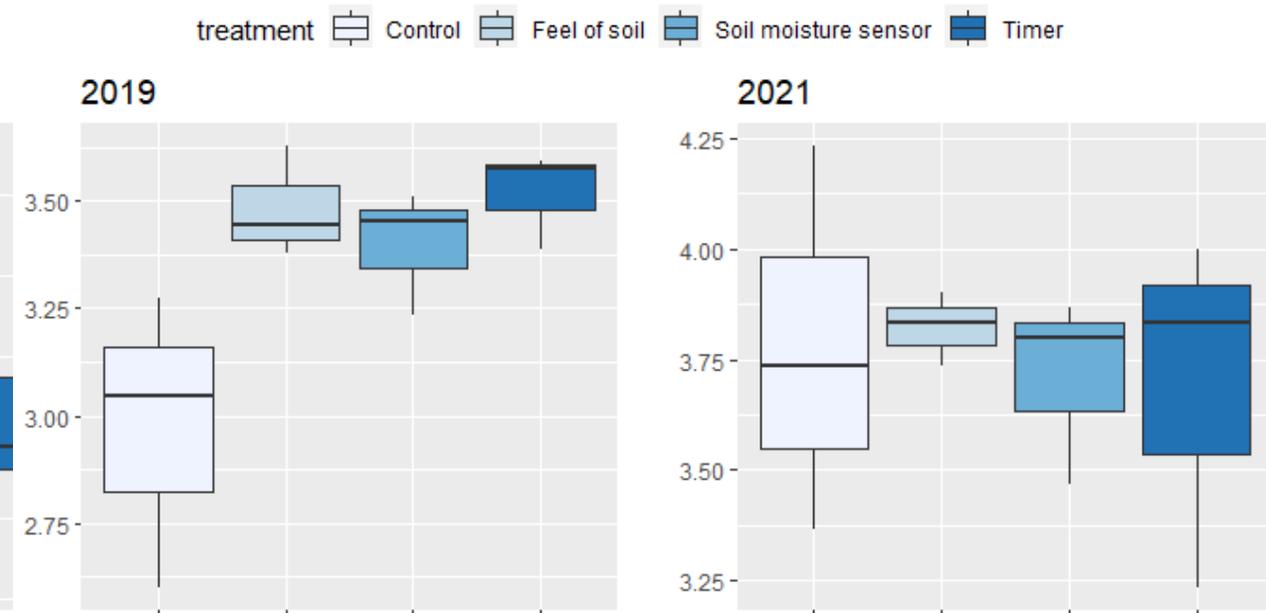
- No difference in quality (defects & firmness) between treatments ( $P < 0.05$ )
- No difference in quality between years ( $P < 0.05$ )

# Quality

## Tomato Defects



## Tomato Firmness



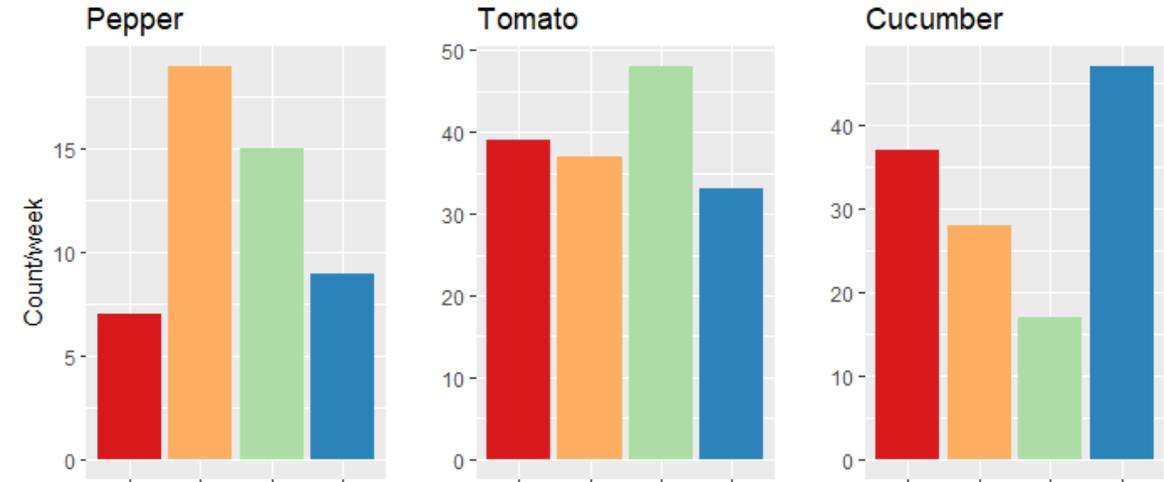
- Tomatoes (and peppers) significantly differed between treatments and years
- Using the feel of soil and using a soil moisture meter performed similarly across the board



# Yield

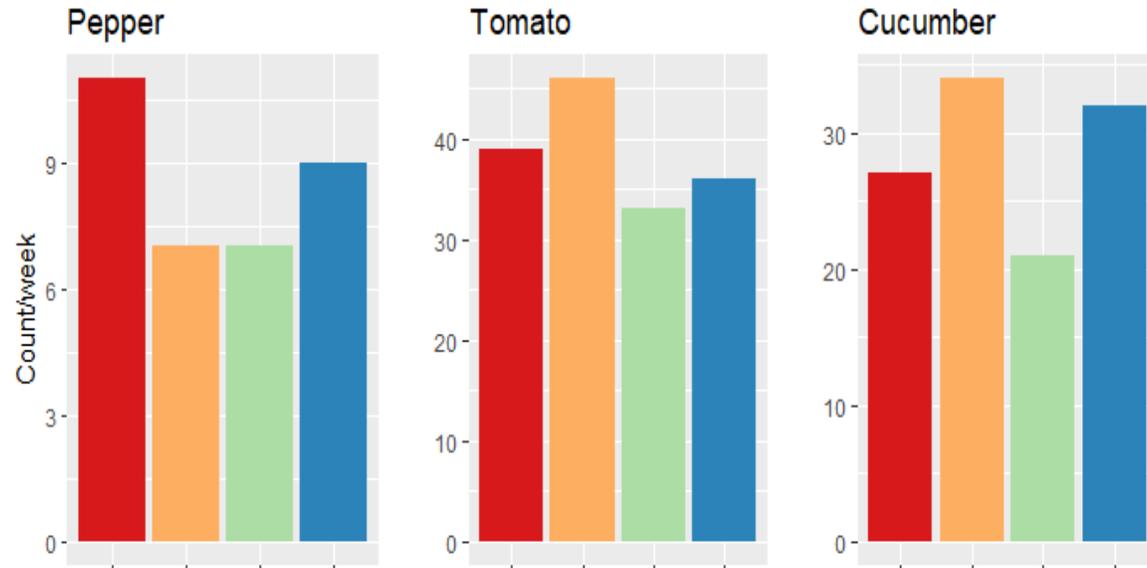
### 2021 Vermont Yield

treatment ■ Feel ■ Moisture sensors ■ No irrigation ■ Timer



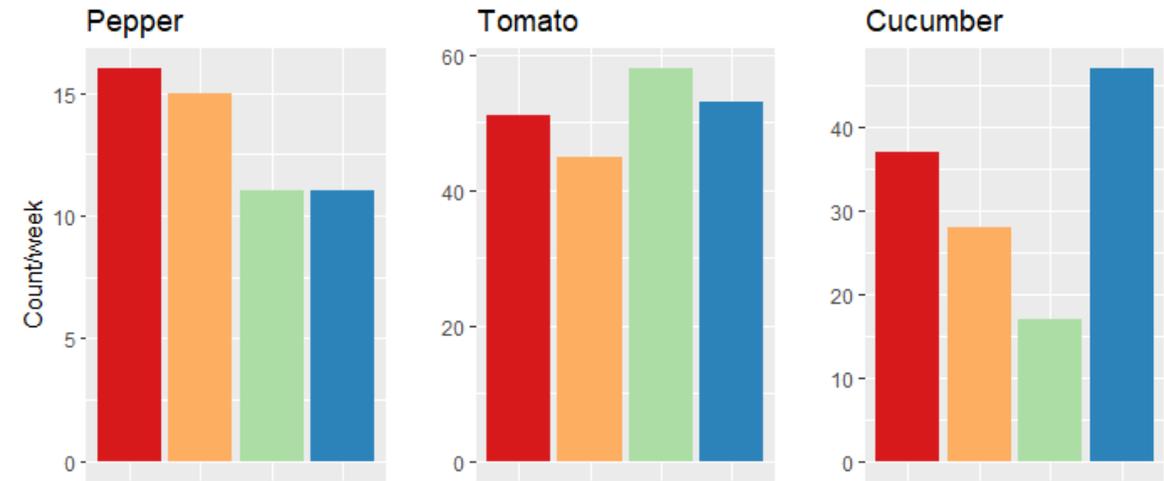
### Maine Yield

treatment ■ Feel ■ Moisture Sensor ■ No irrigation ■ Timer



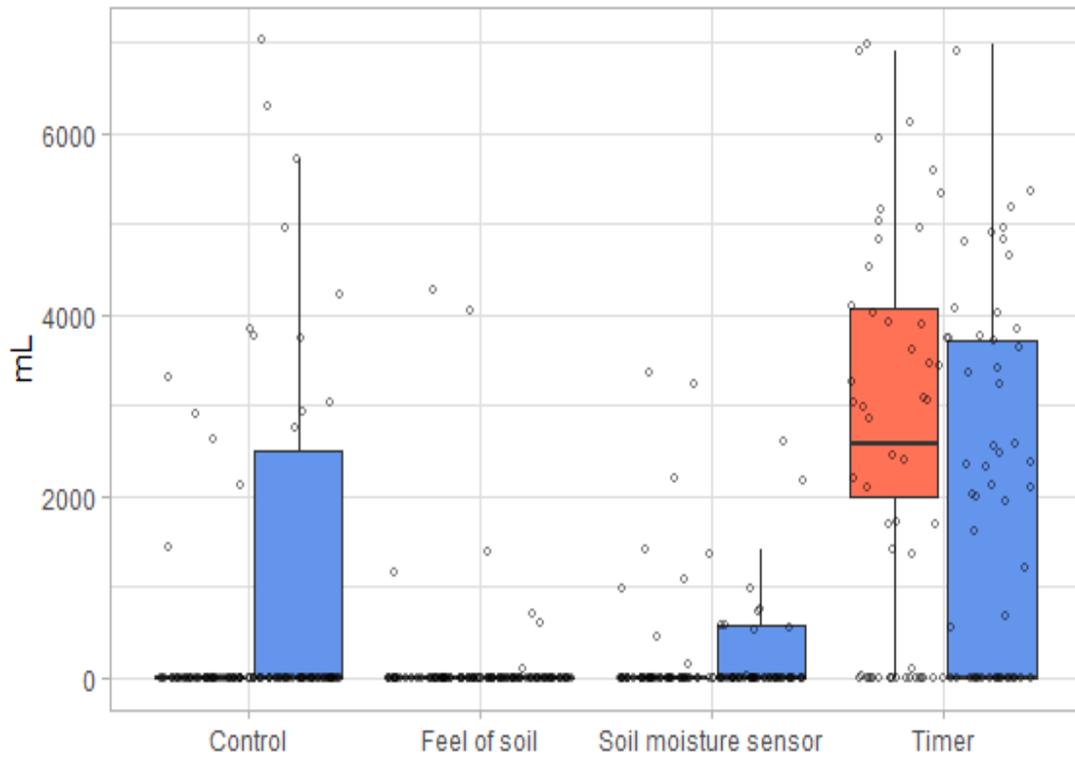
### 2019 Vermont Yield

treatment ■ Feel ■ Moisture sensors ■ No irrigation ■ Timer

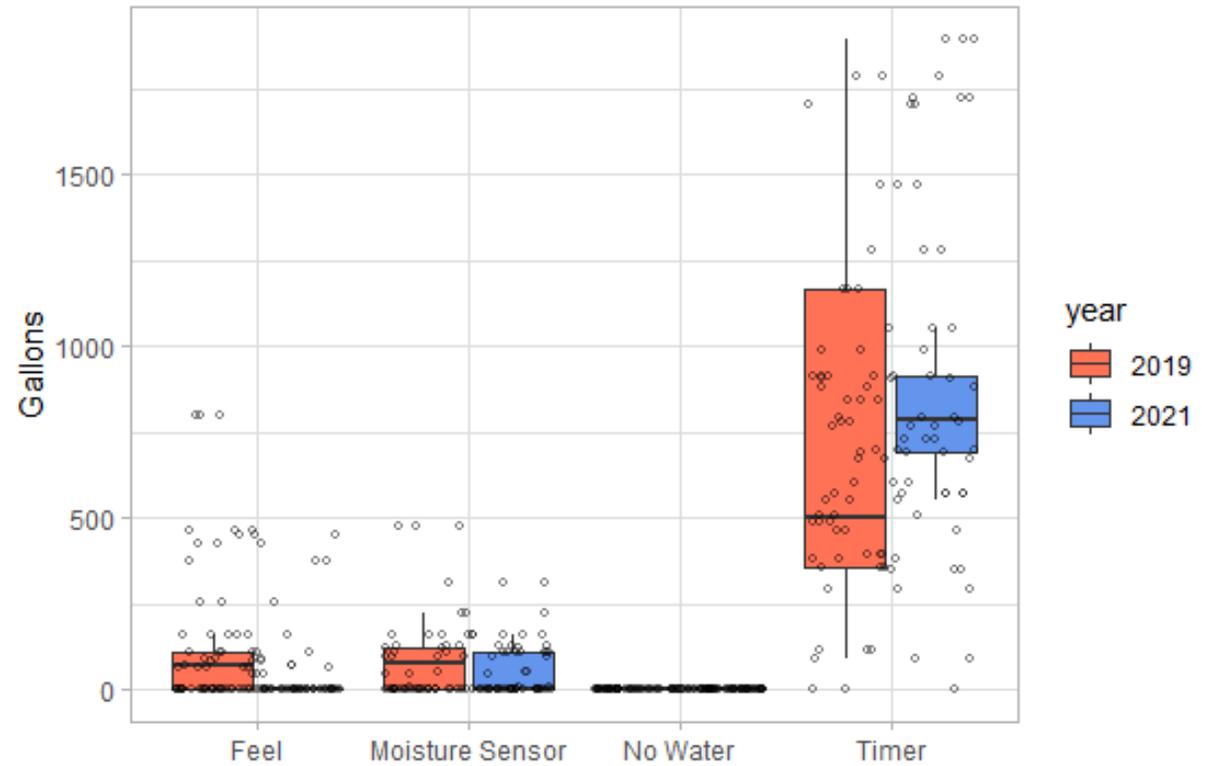


# Leachate and Water Used

## Leachate Collected



## Water Used





## Acknowledgements

- This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number LNE19-391R
- I would also like to acknowledge other team members, Rachel Schattman, Joshua Faulkner, Becky Maden, Jess Foster, and Audrey Seely

# What is coming next

- Another year of data collection in Maine
- Working on a review of the economic choices faced when getting soil moisture meters.