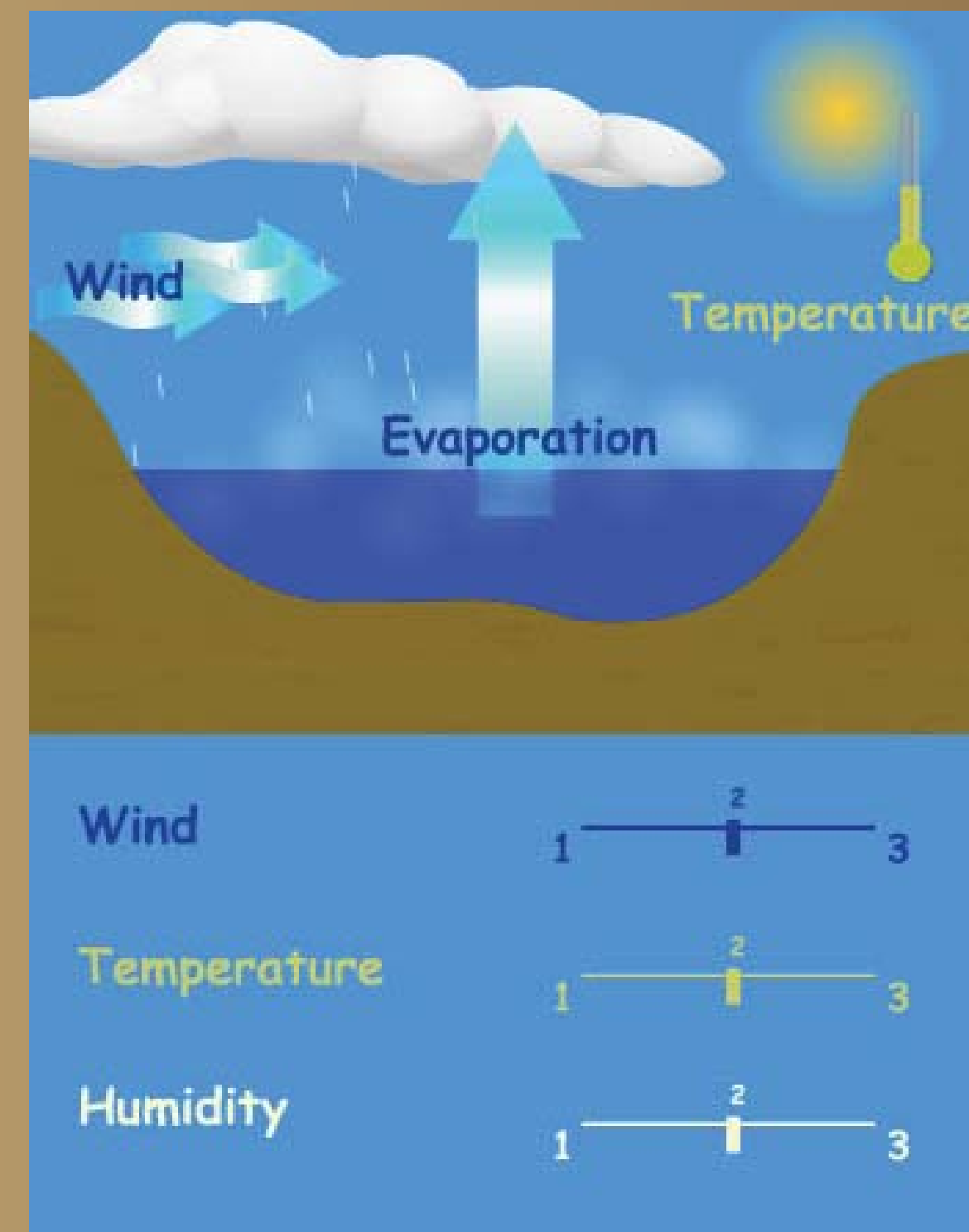


# IPRO 325 Affordable Solutions for the World's Poor: Cooling Subgroup

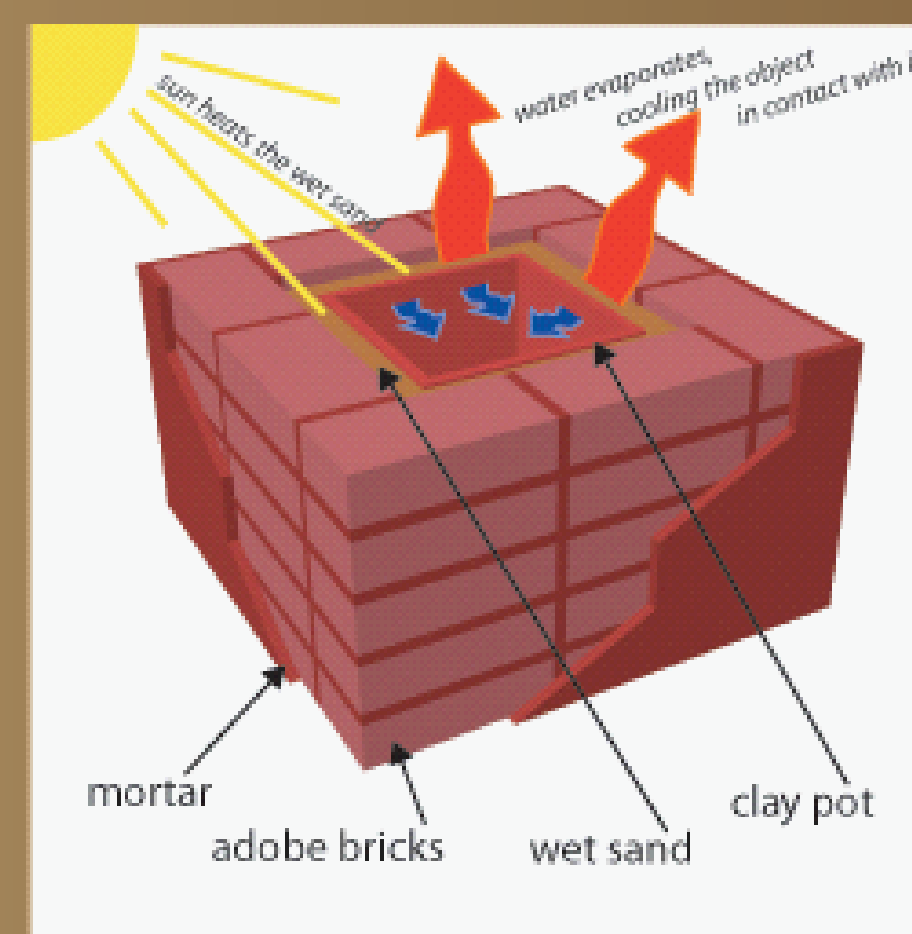
## Process



- A process in which the heat is removed from an object by the evaporation of a liquid coolant

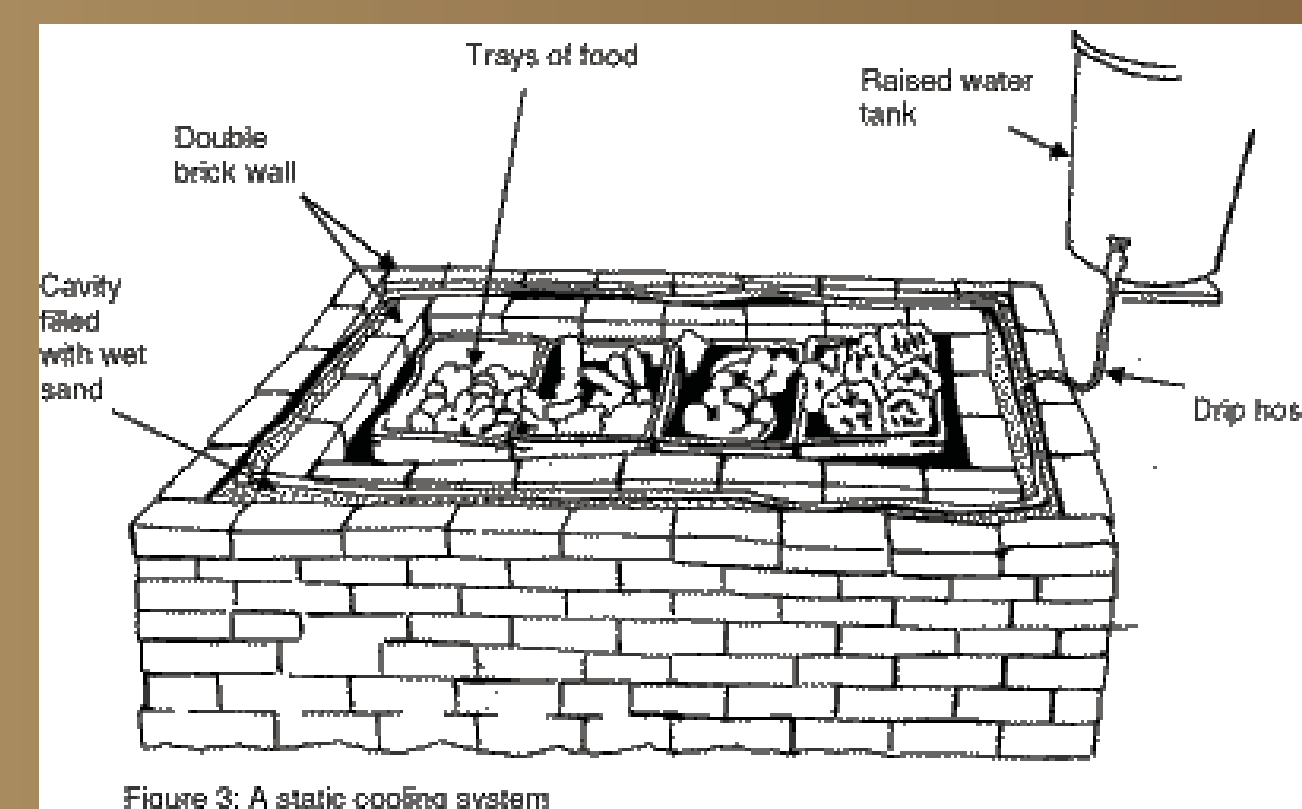
Needs:

- High Temperature
- Low Humidity
- Wind

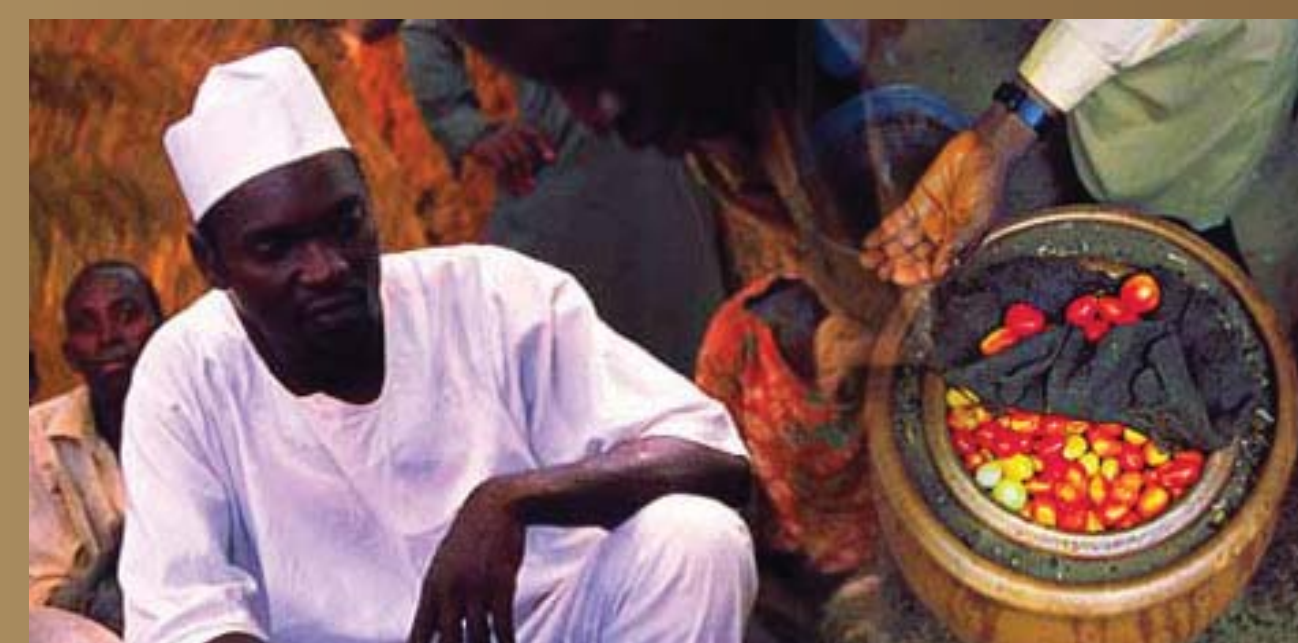


## Precedents

Static Cooling Chamber in India



Zeer Pot Sytem in Nigeria



## Construction Process

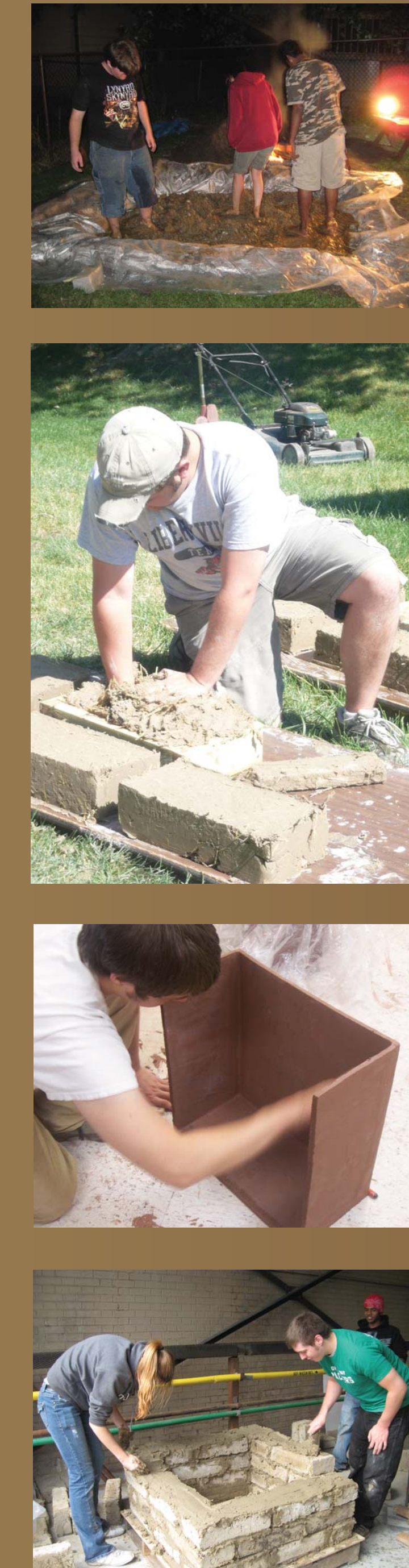
First, we mixed adobe as it is traditionally made

Second, we formed bricks 2 days after and let them dry in the sun for 4 weeks

Third, we made pots from terra cotta clay pots at Professor Stanard's studio

Fourth, we constructed the adobe brick chamber

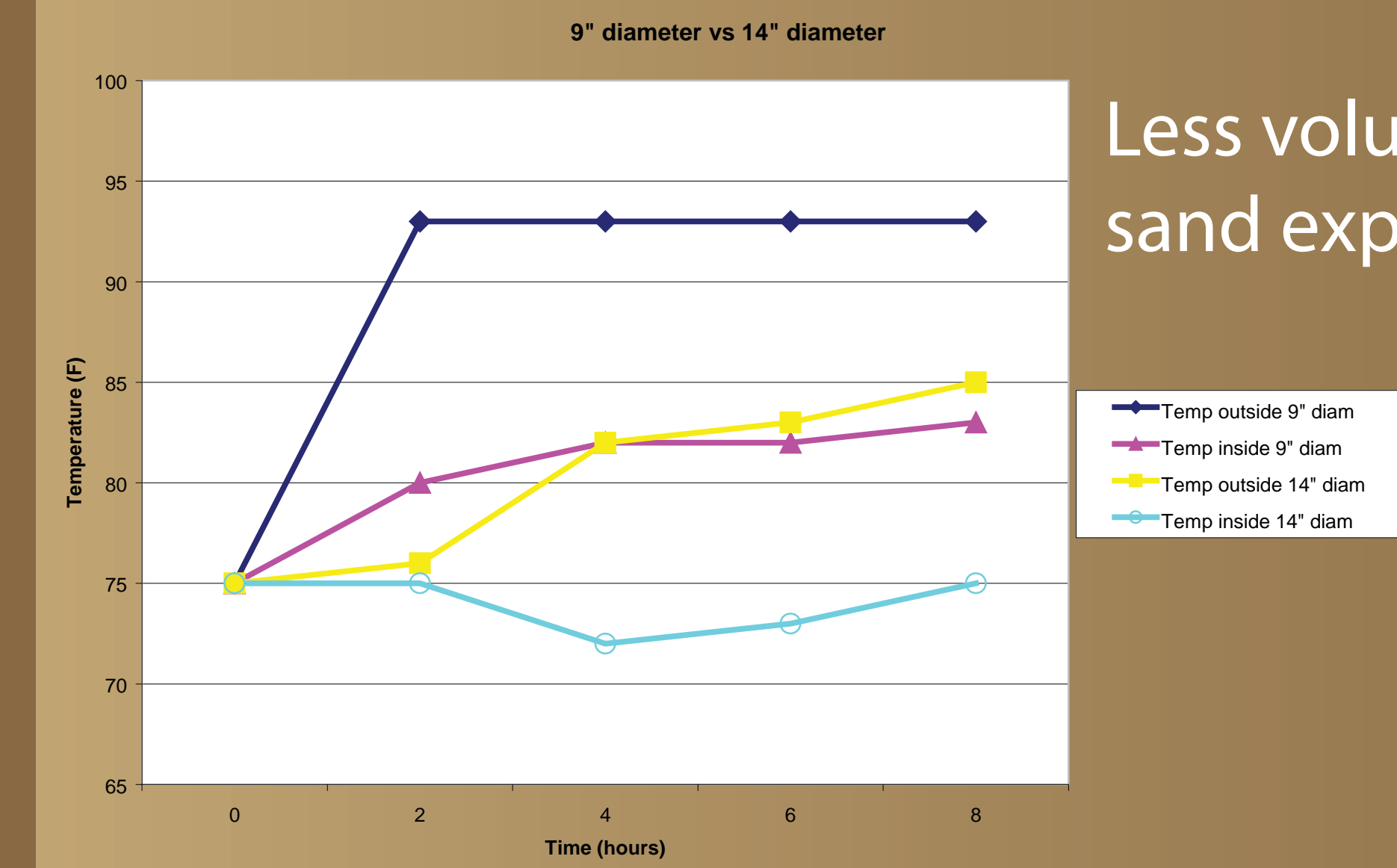
## Tests



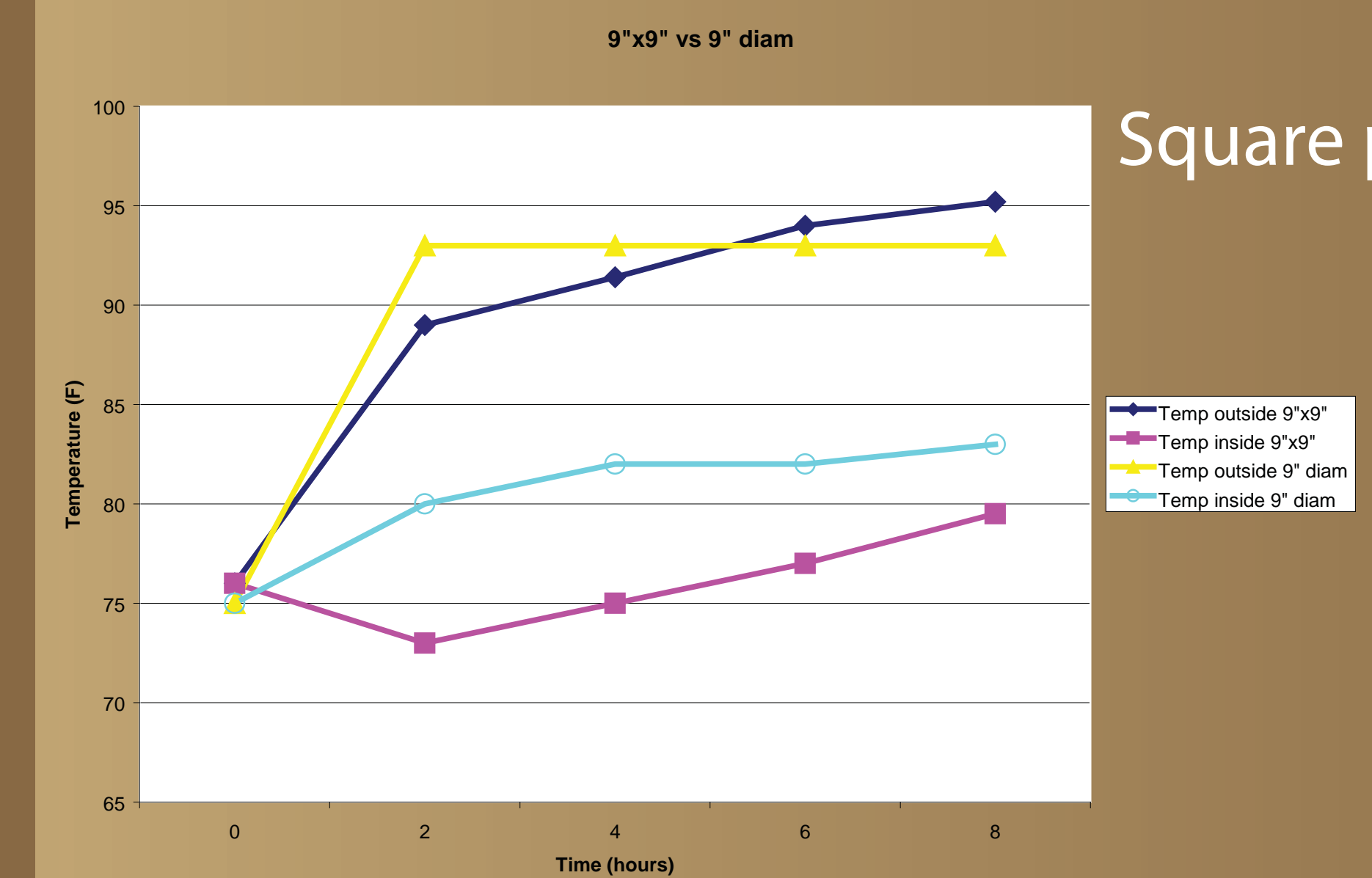
Tested for the largest temperature drop by varying the following...

- Shape of the pot
- Volume of the pot
- Surface Area of the pot
- Surface area of the sand exposed to the air

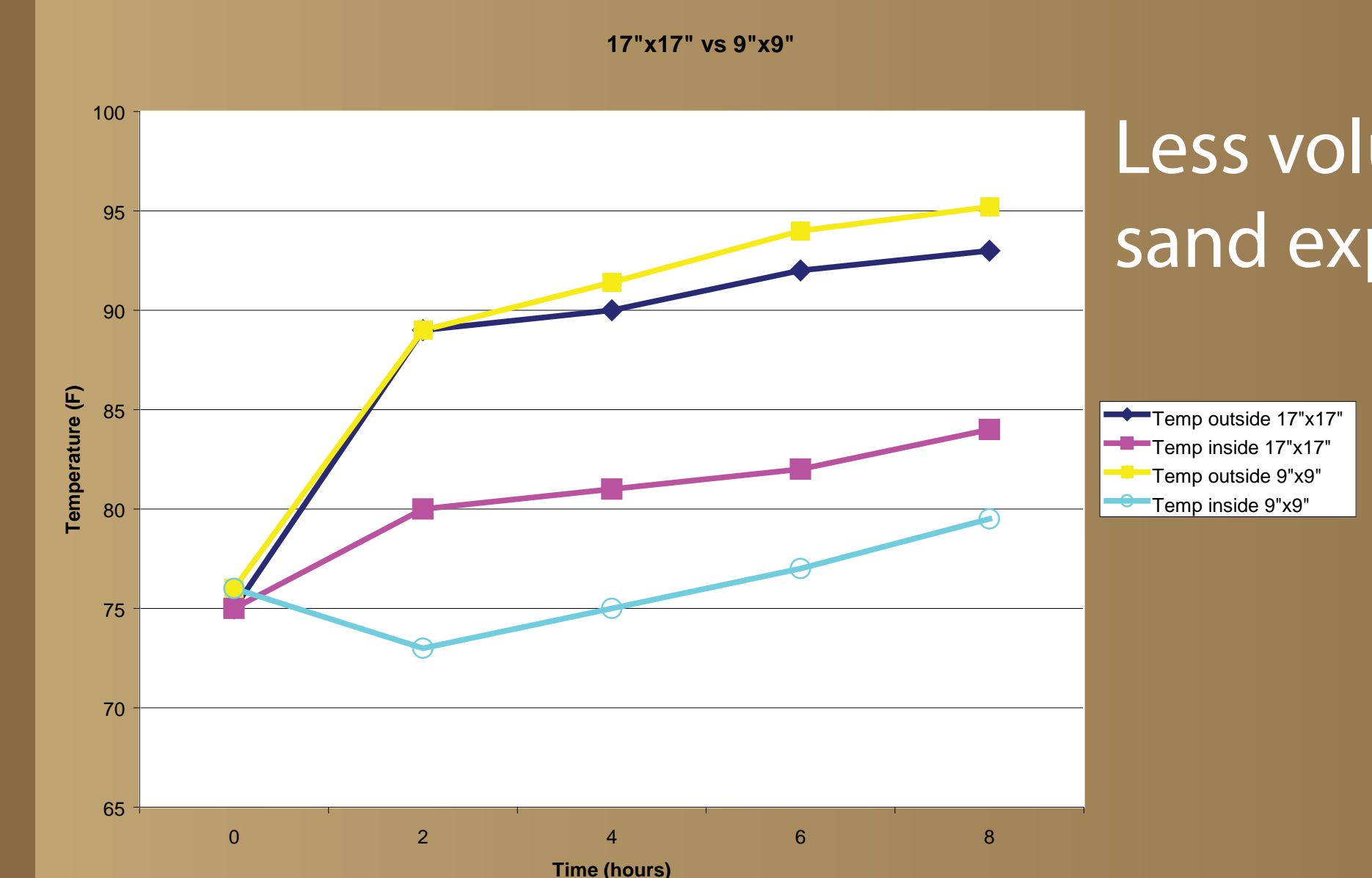
## Results



Less volume and more sand exposed is better



Square pots are better



Less volume and more sand exposed is better

## Recommendations

- Continue in depth testing with proper lab space and more sophisticated instruments
- Long term testing with regional food
- Instructional pamphlet
- On site implementation