

Fruit Testing

Tested: Typical Fruits/Vegetables which may be preserved through refrigeration:

- Mango
- Grapes
- Chile Pepper
- Carrot
- Green Beans

fruit was tested in four environments: open air, vacume, evaporative cooling system, and typical refrigerator

Oct 24th Food Tested: Mango, grapes, green beans, Chile pepper, and carrot

Oct 27th Food in open-air beginning to show signs of quality loss: shrinking and withering of grapes, green beans, carrot. Mango looks fine. Food in evaporative cooling looks fresh, refrigerator looks good, airtight containers are showing slight signs of food quality loss.

Oct 30th Food in open-air is becoming thoroughly shriveled, displays signs of decay. Food in refrigerator is showing signs of quality loss, food in air-tight containers look shriveled, beginning to mold. Food in evaporative cooling system is beginning to show molding.

Nov 4th Food in open-air is completely inedible due mainly to hydration loss and decay. Food in evaporative cooling system is also inedible due to molding. Food in air tight containers is inedible due to decay. Food in fridge is partially edible.

Conclusion: evaporative cooling system preserved food for longer than open air environment, but may have contributed to molding.

Manual Excerpt

1. Background Information

The Solution

1. The warm air heats the brick and the sand.
2. This causes the water to evaporate.
3. The evaporation extracts heat from the pot and cools its contents.

1. Choose a flat exterior area in the shade.
2. The location should have a good wind flow.
3. Understand that water may accumulate on the ground, so place the cooler accordingly.

Sincape, Peru

Climas secos

- Caluroso y seco
- Moderado y seco
- Frio y seco
- Caluroso y árido
- Moderado y árido
- Frio y árido

Climas tropicales

- Humedo - con una estación seca corta
- Humedo - temperatura inferior a 5 °C
- Humedo monótono - intervalo de temperaturas inferior a 5 °C
- Humedo y seco - con una estación seca larga
- Humedo y seco - intervalo de temperaturas inferior a 5 °C

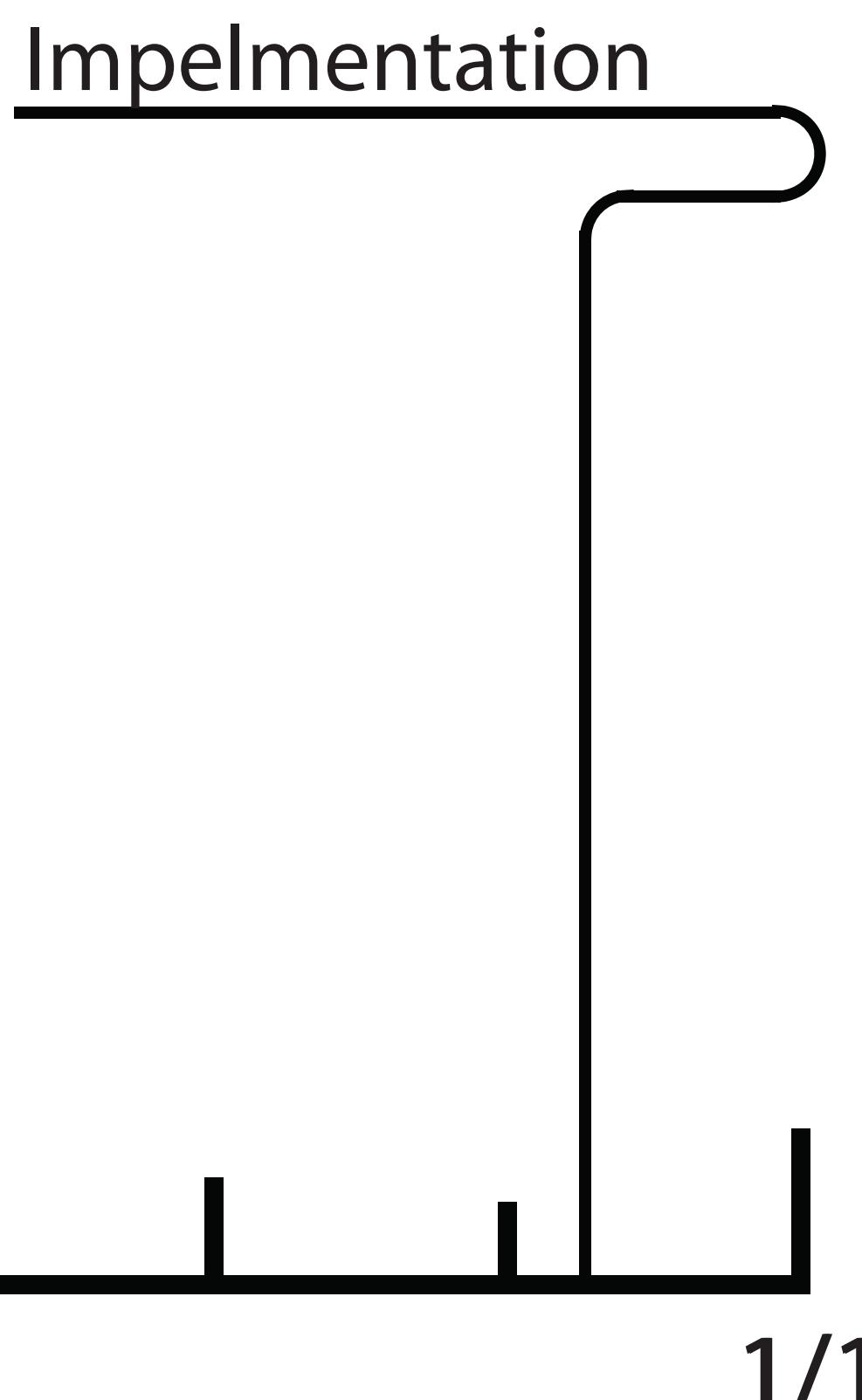
Climas templados húmedos

- Sin sequía - verano caluroso
- Sin sequía - verano fresco
- Sequía en verano -

Ideal climate:
High temperature
Mid to low humidity
Breezes

Most suitable regions of Peru for testing:
Coastline
More tropical areas.

Field Testing will take place in January in Sin cape, Peru. Both climate and economic conditions are in align with project goals of affordable solutions (\$5 to construct)



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