CRICKET-REACTOR

HOUSEHOLD CRICKET • REACTOR

The cricket-reactor utilizes household compost and yard waste streams as feed, to produce food-grade crickets. Cricket-reactors utilize a unique herding method to acheive superior hygienic levels within the farm. Cricket-reactors are designed to be simple to use, escape proof, and can produce meat on a footprint that is 3,000 times smaller than beef.

CRICKET HERDING

Cricket-Reactors are unique in their ability to maintain superior hygiene levels within the cricket habitat. Cricket habitats are kept clean by regularly evacuating one habitat's cricket population into an adjacent habitat; once the habitat is evacuated, it can be detached, spray washed and reattached. Regulariy cleaning the cricket habitats allows one to farm food-grade crickets in extremely high densities, without any of the smell that is typically associated with farming crickets.
The cricket habitats are evacuated via a unique herding mechanism. A one-way exit connects one habitat to the other. Crickets are most active at night, and as a result of their seeking mechanism, they will explore the one-way exit, which results in a complete transfer of crickets from one habitat to the other within a few hours.

FEEDING

Crickets are fed via clear plastic cartridges that are designed to be evacuated, and accessed, without allowing crickets to escape. The cartridges are evacuated via a small hand-operated plunger. As the plunger moves through the cartridge it evokes the cricket's flight response, which prompts them to leave the cartridge. Once the cartridge is evacuated, the entrance is closed via a small hatch.

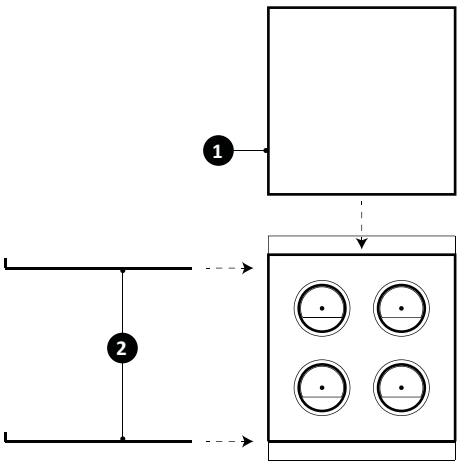
Simply detach the cartridge to fill it with you daily food scraps. Dirty cartridges can be placed into the dishwasher for cleaning and reuse the next day.

HARVESTING & REPRODUCTION

Once the crickets begin chirping, they are ready to begin laying eggs. Several of the cartridges are half filled with moist soil, which prompts the crickets to lay eggs in them. After one day, the soil-filled cartridges are removed, and the cricket-reactor is placed in the refrigerator. Due to the fact that they are cold-blooded, the crickets will fall asleep in the refrigerator. Once the crickets are asleep, they are placed into the freezer, where they will die. This constitutes a far more humane method of euthanizing the crickets, than any existing method of slaughtering livestock.
After harvesting the crickets, the habitat is cleaned, and the soil cartridges are reattached. Within ten days, pinhead (hatchling) crickets will emerge and repopulate the cricket-reactor.

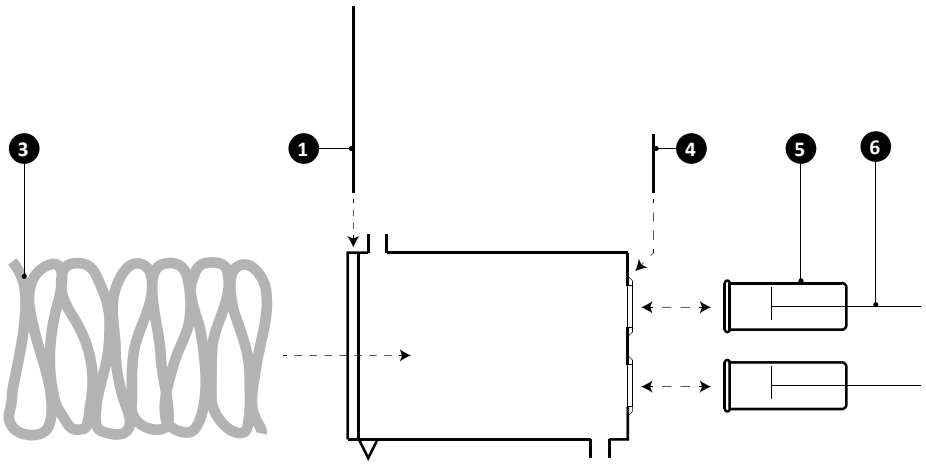
CAPACITY

The cricket-reactor consists of cricket-farming modules. A minimum of two modules are required to herd the crickets. A third module will allow one to double the capacity of the two-module farm.
A three-module farm occupies about one square foot, and can be used to produce 250g of crickets every month; for an annual yield of 3kg/year. At the given capacity, 100 square meters of cricket-reactors could produce one ton of meat annually; otherwise, this could be stated as 3,000 times the capacity of farming beef.



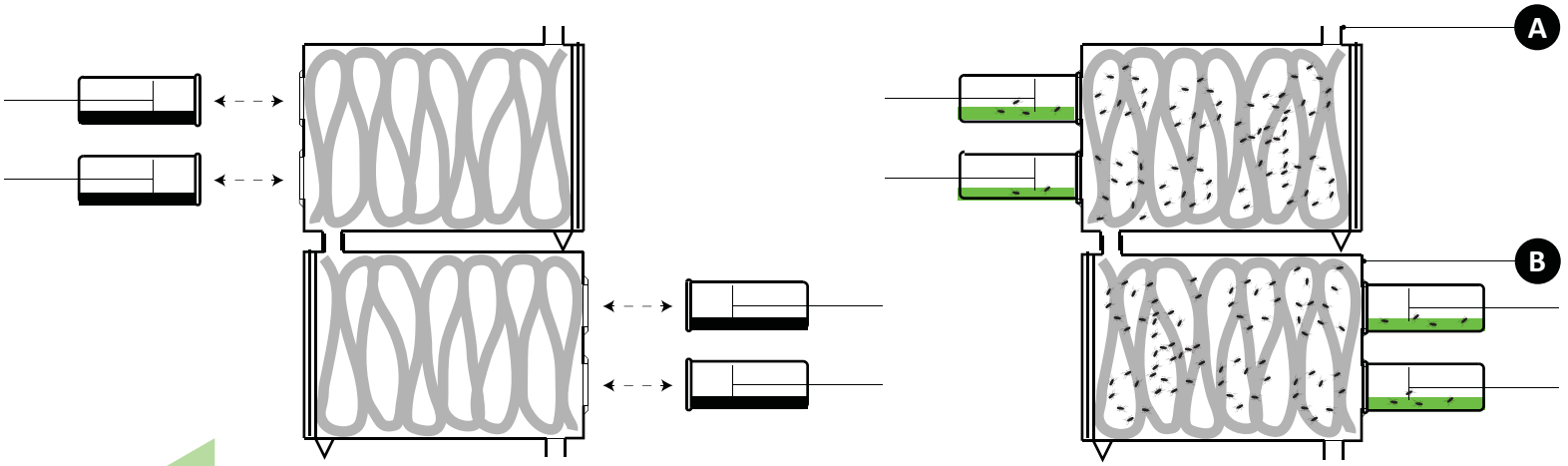
COMPONENTS
FRONT ELEVATION

1. Sliding rear panel
2. Sliding herding doors



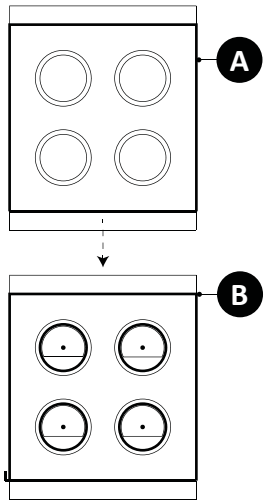
COMPONENTS
SIDE ELEVATION

3. Foam Insert: the purpose of which is to increase the liveable surface area for the crickets.
4. Sliding door for cartridges.
5. Cartridge (can contain feed or egg-laying medium).
6. Cartridge plunger (used for evacuating cartridge).

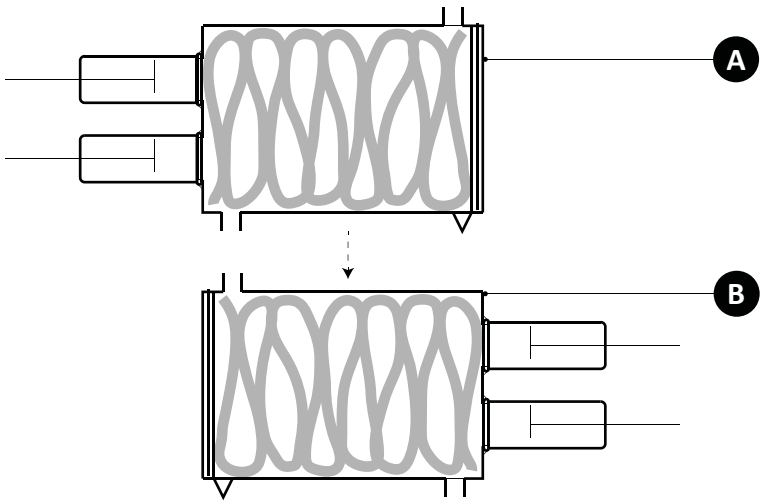


INSERT EGGS & WAIT TO HATCH
DAY 0 TO 10

HATCHED CRICKETS LIVE IN BOTH HABITATS
DAY 10 TO 31

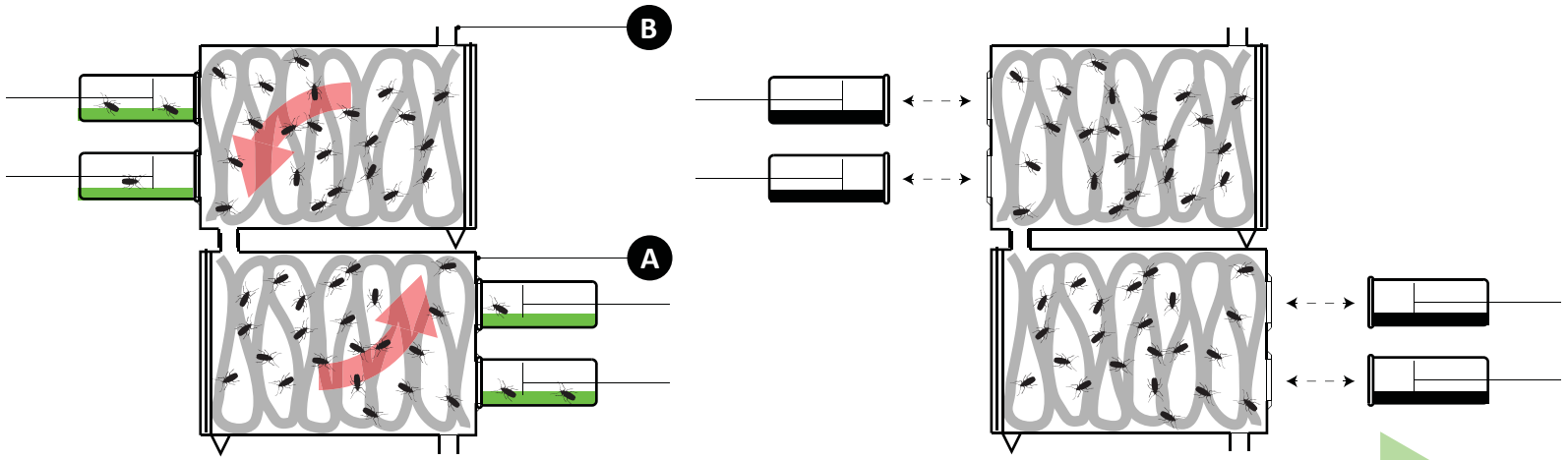


OPERATION
FRONT ELEVATION



OPERATION
SIDE ELEVATION

Crickets are herded from habitat A to habitat B overnight. Once habitat A has been evacuated, it is disassembled, washed, and reassembled. The following night, habitat A is placed under habitat B, and the process is repeated.



HERD CRICKETS
DAY 31 TO 55

INSERT SOIL, LAY EGGS & HARVEST
DAY 56