Black Solider Fly Breeding

- Egg Cluster
- Larvae
- Pupae
- Adult Fly

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Previous Studies

- Phase 1: Determining waste reduction ratio with Bells Brewery
  - 20:1 Ratio

- Phase 2: Breeding in Finch Greenhouse
  - Temperature: 70.63-87.1 degrees
  - Humidity: 33.2-60.4%
  - Direct Sunlight
  - 1 successive generation, but did not make it to adult stage
Current Study

• Long-term project sustainability relies on being able to maintain a stable self-renewing population of BSFL
  • Costly
  • Increased the amount of time between studies

• Summer 2016 - moved the project to the Gibbs House permaculture demonstration site
  • Greenhouse vents made it very difficult to control relative humidity
  • Having the project with other permaculture features makes the most sense
Spring

- Ordered the larvae and tracked
  - Ambient and internal temperatures
  - Relative humidity
  - Energy used
  - Leachate production by BSFL
Data

- Average temperature: 82 degrees
  - Minimum temperature 32 degrees

- Average Relative Humidity: 55%

- Total energy cost: $56.04 - since 2/20/2017
  - $2.16 per day

- Kilowatts: total- 600
  - per day- 11.53
Long term

• Aquaponics

• Giving WMU a recommendation about what would be required to maintain a large-scale BSFL operation to deal with post-consumer food waste