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| **Brood**#**→****ID** **↓** | **Egg #****Day 1** | **Egg #****Day 8** | **Egg #****Day 15** | **Egg #****Day 22** | **Egg #****Day 29** | **Egg #****Day 36** | **Egg #****Day 43** | **Egg #****Day 50** | **Egg #****Day 57** | **Temp** |
| 01-01-001June 25th |  | 30+July 5th | 5+July 9th  | 10July 16th | 10+July 23rd  | 0July 30th | **DEAD** | 84-88° F |
| 01-02-002June 25th**MON** |  | 30+July 5th | 15-20July 9th | 14July 16th | 3July 23rd | 0July 30th | 3August 6th | 5 August 10th | 0August 20th | 84-88° F |
| 01-03-003July 2nd | 8-10July 5th | 20+July 9th | **DEAD** | 73-83° F |
| 01-04-004July 2nd**MON** | 5-7July 5th | 15-20July 9th | 14July 16th | 3+July 23rd | 0July 30th  | 0August 6th | 0August 10th | 0August 20th |  | 73-83° F |
| 01-05-005July 2nd**MON** | 12-15July 5th | 20+July 9th | 11July 16th | 3+July 23rd | 0July 30th  | 0August 6th | 0August 10th | 7August 20th |  | 67-79° F |
| 03-01-007July 8th**SUN** |  | 6July 20th | 40-50July 22nd | 6July 29th  | 4August 6th  | 0August 10th | 4August 20th |  |  | 73-83° F |
| 03-02-008July 10th**TUES** |  | 23July 20th | 6July 24th  | 3July 31st  | 11August 7th  | 2August 10th | 7August 20th |  |  | 67-79° F |
| 04-01-009July 14thFirst worker**SAT** |  |  | 0July 28th  | 0August 3rd  | 3August 7th  | 0August 10th | 0August 20th |  |  | 84-88° F |
| 04-02-010July 14thFirst worker**SAT** |  |  | 0July 28th | 0August 3rd | 0August 7th | 0August 10th | 3August 20th |  |  | 84-88° F |
| 04-03-011July 14th Frstwrkr |  |  | 0July 28th | **DEAD** | 73-83° F |
| 04-04-012July 14thFirst worker**SAT** |  |  | 0July 28th | 0August 3rd | 0August 7th | 0August 10th | 10August 20th |  |  | 73-83° F |
| 04-05-013July 14thFirst worker**SAT** |  |  | 0July 28th | 0August 3rd | 0August 7th | 0August 10th | 0August 20th |  |  | 67-79° F |
| 04-06-014July 14thFirst worker**SAT** |  |  | 0July 28th | 0August 3rd | 6August 7th | 5August 10th | 0August 20th |  |  | 67-79° F |
| **Brood**#**→****ID** **↓** | **Egg #****Day 64** | **Egg #****Day 71** | **Egg #****Day 78** | **Egg #****Day 85** | **Egg #****Day 92** | **Egg #****Day 99** | **Egg #****Day 106** | **Egg #****Day 113** | **Egg #****Day 120** | **Temp** |
| 01-02-002June 25th**MON** |  |  |  |  |  |  |  |  |  | 84-88° F |
| 01-04-004July 2nd**MON** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005July 2nd**MON** |  |  |  |  |  |  |  |  |  | 67-79° F |
| 03-01-007July 8th**SUN** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008July 10th**TUES** |  |  |  |  |  |  |  |  |  | 66-76° F |
| 04-01-009July 14thFirst worker**SAT** |  |  |  |  |  |  |  |  |  | 84-88° F |
| 04-02-010July 14thFirst worker**SAT** |  |  |  |  |  |  |  |  |  | 84-88° F |
| 04-04-012July 14thFirst worker**SAT** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 04-05-013July 14thFirst worker**SAT** |  |  |  |  |  |  |  |  |  | 67-79° F |
| 04-06-014July 14thFirst worker**SAT** |  |  |  |  |  |  |  |  |  | 67-79° F |

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| **Larvae**#**→****ID** **↓** | **Larvae #****Day 1** | **Larvae #****Day 4** | **Larvae #****Day 8** | **Larvae #****Day 11** | **Larvae #****Day 15** | **Larvae #****Day 18** | **Larvae #****Day 22** | **Larvae #****Day 25** | **Larvae #****Day 29** | **Temp** |
| 01-01-001June 25th | 11+July 9th | Missed | 6July 16th | 4July 20th  | 4July 23rd  | 7July 26th  | 7July 30th | **DEAD** | 84-88° F |
| 01-02-002June 25th**MON/THU** | 5+July 9th | Missed | 7July 16th | 12July 20th  | 9July 23rd | 9July 26th | 7July 30th | 14Aug 2nd  | 14August 6th | 84-88° F |
| 01-03-003July 2nd | **DEAD** | 73-83° F |
| 01-04-004July 2nd**MON/THU** | 6July 16th | Missed | 16July 20th  | 16July 23rd | 11July 26th  | 14July 30th | 11August 6th | 9August 9th | 15August 10th | 73-83° F |
| 01-05-005July 2nd**MON/THU** | 5July 16th | Missed | 12July 20th  | 9July 23rd | 9July 26th  | 16July 30th | 6August 6th | 9August 9th | 10August 10th | 67-79° F |
| 03-01-007July 8th**SUN/WED** | 2July 22nd | 18July 25th  | 18July 29th  | 18August 1st  | 14August 6th  | 15August 8th | 12August 10th |  |  | 73-83° F |
| 03-02-008July 10th**TUES** | 6August 10th |  | 2August 20th |  |  |  |  |  |  | 66-79° F |
| 04-01-009July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 6July 28th  | 2July 31st | 9August 3rd | 7August 7th | 84-88° F |
| 04-02-010July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 4July 28th | 5July 31st | 8August 3rd | 7August 7th | 84-88° F |
| 04-03-011July 14th Frstwrkr |  |  |  |  |  | 6July 28th | 6July 31st | **DEAD** | 73-83° F |
| 04-04-012July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 7July 28th | 5July 31st | 12August 3rd | 11August 7th | 73-83° F |
| 04-05-013July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 10July 28th | 11July 31st | 11August 3rd | 21August 7th | 67-79° F |
| 04-06-014July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 6July 28th | 9July 31st | 5August 3rd | 4August 7th | 67-79° F |
| **Larvae**#**→****ID** **↓** | **Larvae #****Day 32** | **Larvae #****Day 36** | **Larvae #****Day 39** | **Larvae #****Day 43** | **Larvae #****Day 46** | **Larvae #****Day 50** | **Larvae #****Day 53** | **Larvae #****Day 57** | **Larvae #****Day 60** | **Temp** |
| 01-02-002June 25th**MON/THU** | 12August 9th | 15August 10th |  |  | 13August 20th |  |  |  |  | 84-88° F |
| 01-04-004July 2nd**MON/THU** | 12August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005July 2nd**MON/THU** |  |  | 4August 20th |  |  |  |  |  |  | 67-79° F |
| 03-01-007July 8th**SUN/WED** | 4August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008July 10th**TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009July 14thFirst worker**SAT/TUES** | 13August 10th |  |  | 15 August 20th |  |  |  |  |  | 84-88° F |
| 04-02-010July 14thFirst worker**SAT/TUES** | 12August 10th |  |  |  10August 20th |  |  |  |  |  | 84-88° F |
| 04-04-012July 14thFirst worker**SAT/TUES** | 19August 10th |  |  | 8August 20th |  |  |  |  |  | 73-83° F |
| 04-05-013July 14thFirst worker**SAT/TUES** | 19August 10th |  |  | 15 August 20th |  |  |  |  |  | 67-79° F |
| 04-06-014July 14thFirst worker**SAT/TUES** | 14August 10th |  |  | 12August 20th |  |  |  |  |  | 67-79° F |

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| **Larvae 1**#**→****ID** **↓** | **Larvae #****Day 1** | **Larvae #****Day 4** | **Larvae #****Day 8** | **Larvae #****Day 11** | **Larvae #****Day 15** | **Larvae #****Day 18** | **Larvae #****Day 22** | **Larvae #****Day 25** | **Larvae #****Day 29** | **Temp** |
| 01-01-001June 25th | 11+July 9th | Missed | 6July 16th | 4July 20th  | 4July 23rd  | 7July 26th  | 7July 30th | **DEAD** | 84-88° F |
| 01-02-002June 25th**MON/THU** | 5+July 9th | Missed | 7July 16th | 12July 20th  | 9July 23rd | 9July 26th | 7July 30th | 14Aug 2nd  | 14August 6th | 84-88° F |
| 01-03-003July 2nd | **DEAD** | 73-83° F |
| 01-04-004July 2nd**MON/THU** | 6July 16th | Missed | 16July 20th  | 16July 23rd | 11July 26th  | 14July 30th | 11August 6th | 9August 9th | 15August 10th | 73-83° F |
| 01-05-005July 2nd**MON/THU** | 5July 16th | Missed | 12July 20th  | 9July 23rd | 9July 26th  | 16July 30th | 6August 6th | 9August 9th | 10August 10th | 67-79° F |
| 03-01-007July 8th**SUN/WED** | 2July 22nd | 18July 25th  | 18July 29th  | 18August 1st  | 14August 6th  | 15August 8th | 12August 10th |  |  | 73-83° F |
| 03-02-008July 10th**TUES** | 6August 10th |  | 2August 20th |  |  |  |  |  |  | 66-79° F |
| 04-01-009July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 6July 28th  | 2July 31st | 9August 3rd | 7August 7th | 84-88° F |
| 04-02-010July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 4July 28th | 5July 31st | 8August 3rd | 7August 7th | 84-88° F |
| 04-03-011July 14th Frstwrkr |  |  |  |  |  | 6July 28th | 6July 31st | **DEAD** | 73-83° F |
| 04-04-012July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 7July 28th | 5July 31st | 12August 3rd | 11August 7th | 73-83° F |
| 04-05-013July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 10July 28th | 11July 31st | 11August 3rd | 21August 7th | 67-79° F |
| 04-06-014July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 6July 28th | 9July 31st | 5August 3rd | 4August 7th | 67-79° F |

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| **Larvae**#**→****ID** **↓** | **Larvae #****Day 32** | **Larvae #****Day 36** | **Larvae #****Day 39** | **Larvae #****Day 43** | **Larvae #****Day 46** | **Larvae #****Day 50** | **Larvae #****Day 53** | **Larvae #****Day 57** | **Larvae #****Day 60** | **Temp** |
| 01-02-002June 25th**MON/THU** | 12August 9th | 15August 10th |  |  | 13August 20th |  |  |  |  | 84-88° F |
| 01-04-004July 2nd**MON/THU** | 12August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005July 2nd**MON/THU** |  |  | 4August 20th |  |  |  |  |  |  | 67-79° F |
| 03-01-007July 8th**SUN/WED** | 4August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008July 10th**TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009July 14thFirst worker**SAT/TUES** | 13August 10th |  |  | 15 August 20th |  |  |  |  |  | 84-88° F |
| 04-02-010July 14thFirst worker**SAT/TUES** | 12August 10th |  |  |  10August 20th |  |  |  |  |  | 84-88° F |
| 04-04-012July 14thFirst worker**SAT/TUES** | 19August 10th |  |  | 8August 20th |  |  |  |  |  | 73-83° F |
| 04-05-013July 14thFirst worker**SAT/TUES** | 19August 10th |  |  | 15 August 20th |  |  |  |  |  | 67-79° F |
| 04-06-014July 14thFirst worker**SAT/TUES** | 14August 10th |  |  | 12August 20th |  |  |  |  |  | 67-79° F |
| **Larvae**#**→****ID** **↓** | **Larvae #****Day 1** | **Larvae #****Day 4** | **Larvae #****Day 8** | **Larvae #****Day 11** | **Larvae #****Day 15** | **Larvae #****Day 18** | **Larvae #****Day 22** | **Larvae #****Day 25** | **Larvae #****Day 29** | **Temp** |
| 01-01-001June 25th | 11+July 9th | Missed | 6July 16th | 4July 20th  | 4July 23rd  | 7July 26th  | 7July 30th | **DEAD** | 84-88° F |
| 01-02-002June 25th**MON/THU** | 5+July 9th | Missed | 7July 16th | 12July 20th  | 9July 23rd | 9July 26th | 7July 30th | 14Aug 2nd  | 14August 6th | 84-88° F |
| 01-03-003July 2nd | **DEAD** | 73-83° F |
| 01-04-004July 2nd**MON/THU** | 6July 16th | Missed | 16July 20th  | 16July 23rd | 11July 26th  | 14July 30th | 11August 6th | 9August 9th | 15August 10th | 73-83° F |
| 01-05-005July 2nd**MON/THU** | 5July 16th | Missed | 12July 20th  | 9July 23rd | 9July 26th  | 16July 30th | 6August 6th | 9August 9th | 10August 10th | 67-79° F |
| 03-01-007July 8th**SUN/WED** | 2July 22nd | 18July 25th  | 18July 29th  | 18August 1st  | 14August 6th  | 15August 8th | 12August 10th |  |  | 73-83° F |
| 03-02-008July 10th**TUES** | 6August 10th |  | 2August 20th |  |  |  |  |  |  | 66-79° F |
| 04-01-009July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 6July 28th  | 2July 31st | 9August 3rd | 7August 7th | 84-88° F |
| 04-02-010July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 4July 28th | 5July 31st | 8August 3rd | 7August 7th | 84-88° F |
| 04-03-011July 14th Frstwrkr |  |  |  |  |  | 6July 28th | 6July 31st | **DEAD** | 73-83° F |
| 04-04-012July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 7July 28th | 5July 31st | 12August 3rd | 11August 7th | 73-83° F |
| 04-05-013July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 10July 28th | 11July 31st | 11August 3rd | 21August 7th | 67-79° F |
| 04-06-014July 14thFirst worker**SAT/TUES** |  |  |  |  |  | 6July 28th | 9July 31st | 5August 3rd | 4August 7th | 67-79° F |

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| **Larvae**#**→****ID** **↓** | **Larvae #****Day 32** | **Larvae #****Day 36** | **Larvae #****Day 39** | **Larvae #****Day 43** | **Larvae #****Day 46** | **Larvae #****Day 50** | **Larvae #****Day 53** | **Larvae #****Day 57** | **Larvae #****Day 60** | **Temp** |
| 01-02-002June 25th**MON/THU** | 12August 9th | 15August 10th |  |  | 13August 20th |  |  |  |  | 84-88° F |
| 01-04-004July 2nd**MON/THU** | 12August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005July 2nd**MON/THU** |  |  | 4August 20th |  |  |  |  |  |  | 67-79° F |
| 03-01-007July 8th**SUN/WED** | 4August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008July 10th**TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009July 14thFirst worker**SAT/TUES** | 13August 10th |  |  | 15 August 20th |  |  |  |  |  | 84-88° F |
| 04-02-010July 14thFirst worker**SAT/TUES** | 12August 10th |  |  |  10August 20th |  |  |  |  |  | 84-88° F |
| 04-04-012July 14thFirst worker**SAT/TUES** | 19August 10th |  |  | 8August 20th |  |  |  |  |  | 73-83° F |
| 04-05-013July 14thFirst worker**SAT/TUES** | 19August 10th |  |  | 15 August 20th |  |  |  |  |  | 67-79° F |
| 04-06-014July 14thFirst worker**SAT/TUES** | 14August 10th |  |  | 12August 20th |  |  |  |  |  | 67-79° F |

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| **Pupae**#**→****ID** **↓** | **Pupae #****Day 1** | **Pupae #****Day 4** | **Pupae #****Day 8** | **Pupae #****Day 11** | **Pupae #****Day 15** | **Pupae #****Day 18** | **Pupae #****Day 22** | **Pupae #****Day 25** | **Pupae #****Day 29** | **Temp** |
| 01-01-001June 25th | 5July 16th | 3July 20th  | 0July 23rd | 0July 26th  | 3July 30th | **DEAD** | 84-88° F |
| 01-02-002June 25th**MON/THU** | 3July 16th | 3July 20th  | 1July 23rd | 0July 26th  | 5July 30th | 2Aug 2nd  | 2August 6th | 0August 9th | 0August 10th | 84-88° F |
| 01-03-003July 2nd | **DEAD** | 73-83° F |
| 01-04-004July 2nd**THU/MON** | 3July 26th | 3July 30th | 2August 6th | 4August 9th | 1August 10th |  |  | 1August 20th |  | 73-83° F |
| 01-05-005July 2nd**MON** | 3August 6th | 5August 9th | 3August 10th |  |  |  |  |  |  | 67-79° F |
| 03-01-007July 8th**SUN/WED** |  0August 6th | 3August 8th | 6August 10th |  | 0August 20th |  |  |  |  | 73-83° F |
| 03-02-008July 10th**TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009July 14thFirst worker**SAT/TUES** |  |  |  |  | 0July 28th  | 1July 31st  | 2August 3rd | 1August 7th | 0August 10th | 84-88° F |
| 04-02-010July 14thFirst worker**SAT/TUES** |  |  |  |  | 3July 28th | 3July 31st | 0August 3rd | 0August 7th | 0August 10th | 84-88° F |
| 04-03-011July 14th frstwrkr |  |  |  |  | 1July 28th | 1July 31st | **DEAD** | 73-83° F |
| 04-04-012July 14thFirst worker**SAT/TUES** |  |  |  |  | 0July 28th | 2July 31st | 0August 3rd | 0August 7th | 0August 10th | 73-83° F |
| 04-05-013July 14thFirst worker**SAT/TUES** |  |  |  |  | 1July 28th | 3July 31st | 0August 3rd | 0August 7th | 0August 10th | 67-79° F |
| 04-06-014July 14thFirst worker**SAT/TUES** |  |  |  |  | 2July 28th | 3July 31st | 0August 3rd | 2August 7th | 0August 10th | 67-79° F |

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| **Pupae**#**→****ID** **↓** | **Pupae #****Day 32** | **Pupae #****Day 36** | **Pupae #****Day 39** | **Pupae #****Day 43** | **Pupae #****Day 46** | **Pupae #****Day 50** | **Pupae #****Day 53** | **Pupae #****Day 57** | **Pupae #****Day 60** | **Temp** |
| 01-02-002June 25th**MON/THU** |  |  | 2August 20th |  |  |  |  |  |  | 84-88° F |
| 01-04-004July 2nd**THU/MON** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005July 2nd**MON** |  |  |  |  |  |  |  |  |  | 67-79° F |
| 03-01-007July 8th**SUN/WED** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008July 10th**TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009July 14thFirst worker**SAT/TUES** |  |  | 6August 20th |  |  |  |  |  |  | 84-88° F |
| 04-02-010July 14thFirst worker**SAT/TUES** |  |  | 5 August 20th |  |  |  |  |  |  | 84-88° F |
| 04-04-012July 14thFirst worker**SAT/TUES** |  |  | 4August 20th |  |  |  |  |  |  | 73-83° F |
| 04-05-013July 14thFirst worker**SAT/TUES** |  |  | 3August 20th |  |  |  |  |  |  | 67-79° F |
| 04-06-014July 14thFirst worker**SAT/TUES** |  |  | 5August 20th |  |  |  |  |  |  | 67-79° F |

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| **Worker**#**→****ID** **↓** | **Worker#****Day 1** | **Worker#****Day 4** | **Worker#****Day 8** | **Worker#****Day 11** | **Worker#****Day 15** | **Worker#****Day 18** | **Worker#****Day 22** | **Worker#****Day 25** | **Worker#****Day 29** | **Temp** |
| 01-01-001June 25th | 11July 20th | 11July 23rd | 11July 28th  | 12July 30th | **DEAD** | 84-88° F |
| 01-02-002June 25th**FRI/MON** | 1July 20th | 5July 23rd | 7July 28th  | 7July 30th | 7August 3rd | 6August 6th | 10August 9th | 10August 10th  |  | 84-88° F |
| 01-03-003July 2nd | **DEAD** | 73-83° F |
| 01-04-004July 2nd**MON** | 7August 6th | 8August 9th | 10August 10th |  |  | 12August 20th |  |  |  | 73-83° F |
| 01-05-005July 2nd**MON** | 4August 9th  | 5August 10th |  |  | 7August 20th |  |  |  |  | 67-79° F |
| 03-01-007July 8th**SUN** |  |  | 8August 20th |  |  |  |  |  |  | 73-83° F |
| 03-02-008July 10th**TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009July 14thFirst worker**SAT/TUES** |  |  |  |  | 11 July 28th  | 13July 31st  | 9August 3rd | 12August 7th  | 11August 10th | 84-88° F |
| 04-02-010July 14thFirst worker**SAT/TUES** |  |  |  |  | 12July 28th | 13July 31st | 13August 3rd | 11August 7th | 15August 10th | 84-88° F |
| 04-03-011July 14th frstwrkr |  |  |  |  | 6July 28th | **DEAD** | 73-83° F |
| 04-04-012July 14thFirst worker**SAT/TUES** |  |  |  |  | 11 July 28th | 11July 31st | 10August 3rd | 10August 7th | 10August 10th | 73-83° F |
| 04-05-013July 14thFirst worker**SAT/TUES** |  |  |  |  | 7July 28th | 7July 31st | 8August 3rd | 5August 7th(6 drowned!) | 5August 10th | 67-79° F |
| 04-06-014July 14thFirst worker**SAT/TUES** |  |  |  |  | 7 July 28th | 9July 31st | 7August 3rd | 10August 7th | 13August 10th | 67-79° F |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Worker**#**→****ID** **↓** | **Worker#****Day 32** | **Worker#****Day 36** | **Worker#****Day 39** | **Worker#****Day 43** | **Worker#****Day 46** | **Worker#****Day 50** | **Worker#****Day 53** | **Worker#****Day 57** | **Worker#****Day 60** | **Temp** |
| 01-02-002June 25th**FRI/MON** |  | 17August 20th |  |  |  |  |  |  |  | 84-88° F |
| 01-04-004July 2nd**MON** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005July 2nd**MON** |  |  |  |  |  |  |  |  |  | 67-79° F |
| 03-01-007July 8th**SUN** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008July 10th**TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009July 14thFirst worker**SAT/TUES** |  |  | 18August 20th |  |  |  |  |  |  | 84-88° F |
| 04-02-010July 14thFirst worker**SAT/TUES** |  |  | 15 August 20th |  |  |  |  |  |  | 84-88° F |
| 04-04-012July 14thFirst worker**SAT/TUES** |  |  | 13August 20th |  |  |  |  |  |  | 73-83° F |
| 04-05-013July 14thFirst worker**SAT/TUES** |  |  | 5 August 20th |  |  |  |  |  |  | 67-79° F |
| 04-06-014July 14thFirst worker**SAT/TUES** |  |  | 13August 20th  |  |  |  |  |  |  | 67-79° F |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Food** **→****ID** **↓** | **Day 1** | **Day 2** | **Day 4** | **Day 8** | **Day 11** | **Day 15** | **Day 18** | **Day 22** |
| 01-01-001June 25th**SUN/WED** | 3mg honeyJuly 22nd Ate all | 6mg honey1 mg fruit flyJuly 23rd Left fly; some honey | 13mg honey2mg fruit flyJuly 25thDidn’t finish | Skip feedingJuly 29th  | **DEAD** |
| 01-02-002June 25th**SUN/WED** | 3mg honeyJuly 22nd Ate all | 6mg honey1 mg fruit flyJuly 23rd Ate all | 12mg honey2mg fruit flyJuly 25thDidn’t finish | Skip feedingJuly 29th | 12mg honey2mg fruit flyAugust 1st  | Keep honeyAdd 2mg fruit fly\* two fliesAugust 3rd\* | 11mg honey3mg fliesAugust 8th  | 6mg honey10mg fruit flyAugust 10th |
| 01-03-003July 2nd | **DEAD** |
| 01-04-004July 2nd**MON/THU** | 9mg honey1mg fruit flyAugust 6th Left some honey | 12mg honey2mg fruit flyAugust 10th  |  |  | 13mg honey4mg fruit flyAugust 19th  |  |  |
| 01-05-005July 2nd**THU/SUN** | 3mg honeyAugust 9th |  |  |  | 15mg honey5mg fruit flyAug 19th |  |  |  |
| 03-01-007July 8th**SUN** |  |  |   | 12mg honey3mg fruit flyAugust 19th |  |  |  |  |
| 03-02-008July 10th**TUES** |  |  |  |  |  |  |  |  |
| 04-01-009July 14thFirst worker**SAT/TUES** | Missed, nothing fedJuly 16th  | Missed, nothing fedJuly 17th  | Missed, nothing fedJuly 19th  | Missed, nothing fedJuly 23rd  | Missed, nothing fedJuly 26rd | 13mg honey2mg fruit flyJuly 28th Day 13\*Didn’t quite finish | 27mg honey5mg fruit flyAugust 1st Day 17\*This is too much honey | Keep honeyAdd 2mg fruit fly\* two fliesAugust 3rd\* |
| 04-02-010July 14thFirst worker**SAT/TUES** | Missed, nothing fedJuly 16th  | Missed, nothing fedJuly 17th  | Missed, nothing fedJuly 19th  | Missed, nothing fedJuly 23rd  | Missed, nothing fedJuly 26rd | 12mg honey2mg fruit flyJuly 28th Day 13\*clean | 26mg honey5mg fruit flyAugust 1st Day 17\* | Keep honeyAdd 2mg fruit fly\* two fliesAugust 3rd\* |
| 04-03-011July 14thFirst worker**SAT/TUES** | Missed, nothing fedJuly 16th  | Missed, nothing fedJuly 17th  | Missed, nothing fedJuly 19th  | Missed, nothing fedJuly 23rd  | Missed, nothing fedJuly 26rd | 14mg honey2mg fruit flyJuly 28thDay 13\*  | **DEAD** |
| 04-04-012July 14thFirst worker**SAT/TUES** | Missed, nothing fedJuly 16th  | Missed, nothing fedJuly 17th  | Missed, nothing fedJuly 19th  | Missed, nothing fedJuly 23rd  | Missed, nothing fedJuly 26rd | 14mg honey2mg fruit flyJuly 28thDay 13\*  | 27mg honey5mg fruit flyAugust 1st Day 17\* | Keep honeyAdd 2mg fruit fly\* two fliesAugust 3rd\* |
| 04-05-013July 14thFirst worker**SAT/TUES** | Missed, nothing fedJuly 16th  | Missed, nothing fedJuly 17th  | Missed, nothing fedJuly 19th  | Missed, nothing fedJuly 23rd  | Missed, nothing fedJuly 26rd | 14mg honey2mg fruit flyJuly 28thDay 13\*  | 27mg honey5mg fruit flyAugust 1st Day 17\* | Keep honeyAdd 2mg fruit fly\* two fliesAugust 3rd\* |
| 04-06-014July 14thFirst worker**SAT/TUES** | Missed, nothing fedJuly 16th  | Missed, nothing fedJuly 17th  | Missed, nothing fedJuly 19th  | Missed, nothing fedJuly 23rd  | Missed, nothing fedJuly 26rd | 13mg honey2mg fruit flyJuly 28thDay 13\*  | 27mg honey5mg fruit flyAugust 1st Day 17\* | Keep honeyAdd 2mg fruit fly\* two fliesAugust 3rd\* |
| **Notes: All protein sources to be dipped in boiling water for 30 seconds prior to weighing and feeding.**  |

|  |  |  |  |  |  |  |  |  |
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| **Food** **→****ID** **↓** | **Day 25** | **Day 29** | **Day 32** | **Day 36** | **Day 39** | **Day 43** | **Day 46** | **Day 50** |
| 01-02-002June 25th**SUN/WED** |  |  | 12mg honey10mg fruit flyAug 19th |  |  |  |  |  |
| 01-04-004July 2nd**MON** |  |  |  |  |  |  |  |  |
| 01-05-005July 2nd**MON** |  |  |  |  |  |  |  |  |
| 03-01-007July 8th**SUN** |  |  |  |  |  |  |  |  |
| 03-02-008July 10th**TUES** |  |  |  |  |  |  |  |  |
| 04-01-009July 14thFirst worker**SAT/TUES** | 1mg sug/salt\*10mg fruit fliesAugust 7th 20:8:1 water, sugar, salt | 6mg honey10mg fruit flyAugust 10th |  |  | 12mg honey10mg fruit flyAug 19th |  |  |  |
| 04-02-010July 14thFirst worker**SAT/TUES** | 1mg sug/salt\*10mg fruit fliesAugust 7th 20:8:1 water, sugar, salt | 6mg honey10mg fruit flyAugust 10th  |  |  | 12mg honey10mg fruit flyAug 19th |  |  |  |
| 04-04-012July 14thFirst worker**SAT/TUES** | 1mg sug/salt\*10mg fruit fliesAugust 7th 20:8:1 water, sugar, salt | 6mg honey10mg fruit flyAugust 10th |  |  | 12mg honey10mg fruit flyAug 19th |  |  |  |
| 04-05-013July 14thFirst worker**SAT/TUES** | 1mg sug/salt\*10mg fruit fliesAugust 7th 20:8:1 water, sugar, salt | 6mg honey10mg fruit flyAugust 10th |  |  | 12mg honey10mg fruit flyAug 19th  |  |  |  |
| 04-06-014July 14thFirst worker**SAT/TUES** | 1mg sug/salt\*10mg fruit fliesAugust 7th 20:8:1 water, sugar, salt | 6mg honey10mg fruit flyAugust 10th |  |  | 11mg honey10mg fruit flyAug 19th  |  |  |  |
| **Notes: All protein sources to be dipped in boiling water for 30 seconds prior to weighing and feeding.**  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Quality Control July** | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am |
| Dummy tube88-93° F |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dummy tube 84-88° F  |  | 85.4 | 85.1 | 85.6 |  | 85.6 | 88.5 | 87.4 |  |  |  |  |  |  |  |  |
| Dummy tube 73-83° F  | 74.9 |  | 79.0 |  | 78.7 |  | 82.9 |  | 73.8 | 74.8 | 82.9 | 80.4 | 75.4 | 78.2 | 82.0 |  |
| Dummy tube 67-79° F  | 70.4 | 74.1 | 75.7 | 73.7 | 70.5 | 75.0 | 77.9 | 75.5 | 67.5 | 69.9 | 79.3 | 75.3 | 69.5 | 73.0 | 78.2 |  |
| **Quality Control July** | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am |
| Dummy tube88-93° F | 88.3 | 88.5 | 92.4 | 92.4 |  |  | 92.3 |  |  |  |  |  |  |  |  |  |
| Dummy tube 84-88° F  |  |  |  |  |  |  |  |  | 85.8 | 88.5 | 89.9 | 87.0 | 85.4 |  |  | 87.9 |
| Dummy tube 73-83° F  |  |  |  |  | 74.4 | 75.0 |  | 80.2 |  |  |  |  |  |  |  |  |
| Dummy tube 67-79° F  | 69.3 | 71.4 | 78.2 | 75.7 | 69.4 | 70.7 | 77.5 | 74.8 | 73.7 | 71.0 | 79.1 | 74.1 | 71.4 |  |  | 76.2 |
| **Quality Control July** | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am |
| Dummy tube88-93° F |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dummy tube 84-88° F  | 85.8 |  |  |  |  | 86.8 | 88.5 |  | 84.2 |  | 89.2 |  |  |  | 91.0 |  |
| Dummy tube 73-83° F  |  | 74.8 | 79.5 | 78.2 | 75.7 |  |  |  |  | 78.8 |  | 80.2 |  |  |  |  |
| Dummy tube 67-79° F  | 71.9 | 68.3 | 75.7 | 72.1 | 70.7 | 74.0 | 75.3 |  | 70.3 | 75.5 | 79.3 | 77.5 |  |  | 80.4 |  |
| **Quality Control August** | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am |
| Dummy tube88-93° F |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dummy tube 84-88° F  |  |  | 89.0 | 87.2 |  | 86.0 | 89.9 | 89.1 |  |  | 90.3 |  |  |  | 88.8 |  |
| Dummy tube 73-83° F  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dummy tube 67-79° F  |  |  | 78.0 | 73.2 |  | 72.1 | 78.0 | 74.7 |  |  | 77.3 |  |  |  | 79.3 |  |
| **Quality Control August** | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am |
| Dummy tube88-93° F |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dummy tube 84-88° F  | 84.0 | 86.3 | 90.5 | 88.1 |  |  |  |  |  |  |  |  |  |  |  |  |
| Dummy tube 73-83° F  |  |  |  |  | 77.8 |  | 80.2 |  |  |  |  |  |  |  |  |  |
| Dummy tube 67-79° F  | 68.1 | 71.9 | 78.4 | 74.5 | 69.2 |  | 77.1 |  |  |  |  |  |  |  |  |  |
| **Quality Control September** | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am |
| Dummy tube88-93° F |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dummy tube 84-88° F  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dummy tube 73-83° F  |  | 69.6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dummy tube 67-79° F  |  | 65.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Quality Control (Humidity)** | **69° F** | **71° F** | **73° F** | **75° F** | **77° F** | **79° F** | **81° F** | **83° F** | **85° F** | **87° F** | **89° F** | **91° F** | **93° F** | **95° F** | **97° F** | **99° F** |
| Humidity88-93° F |  |  |  |  |  |  |  |  |  |  | 99% RH | 99% RH | 99% RH |  |  |  |
| Humidity 84-88° F |  |  |  |  |  |  |  | 99% RH | 99% RH | 99% RH |  |  |  |  |  |  |
| Humidity 73-83° F  |  |  | 99% RH | 99% RH | 99% RH | 99% RH | 99% RH | 99% RH |  |  |  |  |  |  |  |  |
| Humidity 67-79° F  | 99% RH | 99% RH | 99% RH | 99% RH | 99% RH | 99% RH |  |  |  |  |  |  |  |  |  |  |

Feeding data from previous experiment. Day 1 begins 3 days after first nanitics are observed.

Absolute beginning:

1. Day 1: 3mg honey
2. Day 2: 6mg honey, 1mg fruit fly
	1. Can skip day 1 feeding, doesn’t matter
3. Day 4: 12mg honey, 2mg fruit fly
4. Day 8: Skip
5. Day 11: 12mg honey, 2mg fruit fly
6. Day 15: Keep honey, add 2mg fruit fly
7. Day 18: 11mg honey, 3mg fruit fly
8. Day 22: 6mg honey, 10mg fruit fly
9. Day 25 & 29: Skip
10. Day 32: 12mg honey, 10mg fruit fly
11. Day 36 is where 002 begins.

Had first nanitics, were not fed for 2 weeks since then:

1. Day 15: 13mg honey, 2mg fruit fly
2. Day 18: 27mg honey, 5mg fruit fly (too much honey)
3. Day 22: Keep honey, add 2mg fruit fly
4. Day 25: 1mg sug/salt, 10mg fruit fly
5. Day 29: 6mg honey, 10mg fruit fly
6. Day 32 & 36: Skip
7. Day 39: 12mg honey, 10mg fruit fly
8. Day 43 is where 009 begins.

Feeding procedure: Protein consists of fruit flies and mealworms. The live insects are sterilized in boiling water for 30 seconds or longer, dried out on a paper towel, and then weighed using a milligram scale. The mealworms are cut using a #3 scapel widthwise (side to side, not top to bottom). Raw organic honey is the only form of sugar given to all colonies. See feeding schedule below and from previous data.

**L-002**: Caught June 25th, temps were 84-88° F in July, 86-90° F in August. Standard care. Follow-up study continued from experiment 01, piggyback data and feeding schedule refer to experiment 01 datasheet.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OR-TET-IMMI-05-01-L-002  | Egg | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | 4th Instar Larvae | Pupae | Worker |
| Day 59August 23rd | **0** | **2** | **2** | **7** | **3** | **4** | **22** |
| Day 63August 26th  | **0** | **3** | **0** | **9** | **0** | **7** | **23** |
| Day 67August 30th | **0** | **0** | **3** | **10** | **7** | **8** | **24** |
| Day 70September 2nd | **0** | **0** | **2** | **5** | **4** | **12** | **27** |
| Day 74September 6th  | **0** | **0** | **7** | **13** | **5** | **8** | **31** |
| Day 77September 9th  | **0** | **2** | **12** | **8** | **8** | **11** | **39** |
| Day 81September 13th  | **0** | **0** | **8** | **13** | **14** | **13** | **51** |
| Day 84September 16th |  |  |  |  |  |  |  |
| Day 88September 20th |  |  |  |  |  |  |  |
| Day 91September 23rd |  |  |  |  |  |  |  |
| Day 95September 27th  |  |  |  |  |  |  |  |
| Day 98September 30th  |  |  |  |  |  |  |  |
| Day 102October 4th  |  |  |  |  |  |  |  |
| Day 105October 7th  |  |  |  |  |  |  |  |
| Day 109October 11th  |  |  |  |  |  |  |  |
| Day 112October 14th  |  |  |  |  |  |  |  |
| Day 116October 18th  |  |  |  |  |  |  |  |
| Day 119October 21st  |  |  |  |  |  |  |  |
| Food Record | Sugar | Protein |
| August 23rd  | **15mg honey** | **58mg mealworm** |
| August 26th  |  |  |
| August 30th  | **16mg honey** | **89mg mealworm, 10mg fruit fly** |
| September 2nd |  |  |
| September 6th  | **20mg honey** | **136mg mealworm** |
| September 9th  |  |  |
| September 13th  | **40mg honey** | **15mg fruit fly, 255mg mealworm** |
| September 16th  |  |  |
| September 20th  |  |  |
| September 23rd  |  |  |
| September 27th  |  |  |
| September 30th  |  |  |
| October 4th  |  |  |
| October 7th  |  |  |
| October 11th  |  |  |
| October 14th  |  |  |
| October 18th  |  |  |
| October 21st  |  |  |

**L-004**: Caught July 2nd, temps were 73-83° F in July, 76-85° F in August. Standard care. Follow-up study continued from experiment 01, piggyback data and feeding schedule refer to experiment 01 datasheet.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OR-TET-IMMI-05-02-L-004  | Egg | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | 4th Instar Larvae | Pupae | Worker |
| Day 49August 23rd | **0** | **6** | **3** | **6** | **1** | **1** | **12** |
| Day 53August 26th  | **0** | **0** | **2** | **3** | **3** | **3** | **12** |
| Day 57August 30th | **0** | **0** | **3** | **3** | **11** | **4** | **15** |
| Day 60September 2nd | **0** | **2** | **0** | **6** | **8** | **6** | **15** |
| Day 64September 6th  | **3** | **1** | **14** | **6** | **4** | **11** | **16** |
| Day 67September 9th  | **0** | **9** | **8** | **11** | **2** | **8** | **22** |
| Day 71September 13th  | **0** | **0** | **17** | **12** | **7** | **9** | **20** |
| Day 74September 16th |  |  |  |  |  |  |  |
| Day 78September 20th |  |  |  |  |  |  |  |
| Day 81September 23rd |  |  |  |  |  |  |  |
| Day 85September 27th  |  |  |  |  |  |  |  |
| Day 88September 30th  |  |  |  |  |  |  |  |
| Day 92October 4th  |  |  |  |  |  |  |  |
| Day 95October 7th  |  |  |  |  |  |  |  |
| Day 99October 11th  |  |  |  |  |  |  |  |
| Day 102October 14th  |  |  |  |  |  |  |  |
| Day 106October 18th  |  |  |  |  |  |  |  |
| Day 109October 21st  |  |  |  |  |  |  |  |
| Food Record | Sugar | Protein |
| August 23rd  | **Day 18: 11mg honey** | **3mg fruit fly** |
| August 26th  | **6mg honey** | **10mg fruit fly** |
| August 30th  | **Skip** |  |
| September 2nd | **Skip** |  |
| September 6th  | **12mg honey** | **10mg fruit fly** |
| September 9th  | **13mg honey** | **70mg mealworm** |
| September 13th  | **19mg honey** | **10mg fruit fly, 116mg mealworm** |
| September 16th  |  |  |
| September 20th  |  |  |
| September 23rd  |  |  |
| September 27th  |  |  |
| September 30th  |  |  |
| October 4th  |  |  |
| October 7th  |  |  |
| October 11th  |  |  |
| October 14th  |  |  |
| October 18th  |  |  |
| October 21st  |  |  |

**L-005**: Caught July 2nd, temps were 67-79° F in July, 69-79° F in August. Standard care. Follow-up study continued from experiment 01, piggyback data and feeding schedule refer to experiment 01 datasheet.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OR-TET-IMMI-05-03-L-005  | Egg | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | 4th Instar Larvae | Pupae | Worker |
| Day 49August 23rd | **0** | **0** | **5** | **2** | **3** | **0** | **8 (-2)** |
| Day 53August 26th  | **0** | **0** | **3** | **3** | **5** | **1** | **11** |
| Day 57August 30th | **0** | **0** | **5** | **7** | **5** | **1** | **10** |
| Day 60September 2nd | **8** | **2** | **0** | **9** | **3** | **0** | **9 (-1)** |
| Day 64September 6th  | **0** | **0** | **4** | **5** | **4** | **4** | **10** |
| Day 67September 9th  | **0** | **0** | **0** | **6** | **4** | **10** | **10** |
| Day 71September 13th  | **0** | **0** | **0** | **4** | **6** | **10** | **10** |
| Day 74September 16th |  |  |  |  |  |  |  |
| Day 78September 20th |  |  |  |  |  |  |  |
| Day 81September 23rd |  |  |  |  |  |  |  |
| Day 85September 27th  |  |  |  |  |  |  |  |
| Day 88September 30th  |  |  |  |  |  |  |  |
| Day 92October 4th  |  |  |  |  |  |  |  |
| Day 95October 7th  |  |  |  |  |  |  |  |
| Day 99October 11th  |  |  |  |  |  |  |  |
| Day 102October 14th  |  |  |  |  |  |  |  |
| Day 106October 18th  |  |  |  |  |  |  |  |
| Day 109October 21st  |  |  |  |  |  |  |  |
| Food Record | Sugar | Protein |
| August 23rd  | **15mg honey** | **2mg fruit fly** |
| August 26th  | **14mg honey** | **3mg fruit fly** |
| August 30th  | **Day 22: 10mg honey** | **10mg fruit fly** |
| September 2nd | **Skip** |  |
| September 6th  | **Skip** |  |
| September 9th  | **15mg honey** | **10mg fruit fly** |
| September 13th  | **17mg honey** | **70mg mealworm** |
| September 16th  |  |  |
| September 20th  |  |  |
| September 23rd  |  |  |
| September 27th  |  |  |
| September 30th  |  |  |
| October 4th  |  |  |
| October 7th  |  |  |
| October 11th  |  |  |
| October 14th  |  |  |
| October 18th  |  |  |
| October 21st  |  |  |

**L-007**: Caught July 8th, temps were 73-83° F in July, 76-85° F in August. Standard care. Follow-up study continued from experiment 03, piggyback data and feeding schedule refer to experiment 03 datasheet.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OR-TET-IMMI-05-04-L-007  | Egg | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | 4th Instar Larvae | Pupae | Worker |
| Day 46August 23rd | **0 dt** | **0 dt** | **0 dt** | **0 dt** | **2 dt** | **1 dt** | **12** |
| Day 50August 26th  | **0 dt** | **1** | **1** | **1** | **4 dt** | **3 dt** | **14** |
| Day 54August 30th | **dt** | **dt** | **dt** | **dt** | **4 dt** | **3 dt** | **15** |
| Day 57September 2nd | **0** | **0** | **5** | **5** | **2** | **3** | **15** |
| Day 61September 6th  | **Queen dead, no more data. Workers merged w/ colony A-001** |
| Day 64September 9th  |  |  |  |  |  |  |  |
| Day 68September 13th  |  |  |  |  |  |  |  |
| Day 71September 16th |  |  |  |  |  |  |  |
| Day 75September 20th |  |  |  |  |  |  |  |
| Day 78September 23rd |  |  |  |  |  |  |  |
| Day 82September 27th  |  |  |  |  |  |  |  |
| Day 85September 30th  |  |  |  |  |  |  |  |
| Day 89October 4th  |  |  |  |  |  |  |  |
| Day 92October 7th  |  |  |  |  |  |  |  |
| Day 96October 11th  |  |  |  |  |  |  |  |
| Day 99October 14th  |  |  |  |  |  |  |  |
| Day 103October 18th  |  |  |  |  |  |  |  |
| Day 106October 21st  |  |  |  |  |  |  |  |
| Food Record | Sugar | Protein |
| August 23rd  | **Day 11: 15mg honey** | **5 fruit fly** |
| August 26th  | **13mg honey** | **3mg fruit fly** |
| August 30th  | **12mg honey** | **3mg fruit fly** |
| September 2nd |  |  |
| September 6th  |  |  |
| September 9th  |  |  |
| September 13th  |  |  |
| September 16th  |  |  |
| September 20th  |  |  |
| September 23rd  |  |  |
| September 27th  |  |  |
| September 30th  |  |  |
| October 4th  |  |  |
| October 7th  |  |  |
| October 11th  |  |  |
| October 14th  |  |  |
| October 18th  |  |  |
| October 21st  |  |  |

**L-008**: Caught July 10th, temps were 67-79° F in July, 69-79° F in August. Standard care. Follow-up study continued from experiment 03, piggyback data and feeding schedule refer to experiment 03 datasheet.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OR-TET-IMMI-05-05-L-008 | Egg | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | 4th Instar Larvae | Pupae | Worker |
| Day 44August 23rd | **2** | **4** | **0** | **0** | **0** | **0** | **0** |
| Day 48August 26th  | **1** | **4** | **1** | **0** | **0** | **0** | **0** |
| Day 52August 30th | **1** | **3** | **2** | **0** | **0** | **1** | **0** |
| Day 55September 2nd | **0** | **2** | **1** | **1** | **0** | **0** | **0** |
| Day 59September 6th  | **0** | **0** | **3** | **1** | **0** | **0** | **0** |
| Day 62September 9th  | **END** | **MIXED** | **WITH** | **001** | **AND** | **007** | **brood** |
| Day 66September 13th  |  |  |  |  |  |  |  |
| Day 69September 16th |  |  |  |  |  |  |  |
| Day 73September 20th |  |  |  |  |  |  |  |
| Day 76September 23rd |  |  |  |  |  |  |  |
| Day 80September 27th  |  |  |  |  |  |  |  |
| Day 83September 30th  |  |  |  |  |  |  |  |
| Day 87October 4th  |  |  |  |  |  |  |  |
| Day 90October 7th  |  |  |  |  |  |  |  |
| Day 94October 11th  |  |  |  |  |  |  |  |
| Day 97October 14th  |  |  |  |  |  |  |  |
| Day 101October 18th  |  |  |  |  |  |  |  |
| Day 104October 21st  |  |  |  |  |  |  |  |
| Food Record | Sugar | Protein |
| August 23rd  |  |  |
| August 26th  | **10mg honey** |  |
| August 30th  |  |  |
| September 2nd |  |  |
| September 6th  |  |  |
| September 9th  |  |  |
| September 13th  |  |  |
| September 16th  |  |  |
| September 20th  |  |  |
| September 23rd  |  |  |
| September 27th  |  |  |
| September 30th  |  |  |
| October 4th  |  |  |
| October 7th  |  |  |
| October 11th  |  |  |
| October 14th  |  |  |
| October 18th  |  |  |
| October 21st  |  |  |

**L-009**: Caught approx. early June. First workers July 14th, kept at ~70-77° F prior to July 28th. Day 1 begins on July 14th. Temps were 86-90° F in August. Standard care. Follow-up study continued from experiment 04, piggyback data and feeding schedule refer to experiment 04 datasheet.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OR-TET-IMMI-05-06-L-009 | Egg | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | 4th Instar Larvae | Pupae | Worker |
| Day 40August 23rd | **0** | **2** | **4** | **4** | **5** | **4** | **22** |
| Day 44August 26th  | **0** | **0** | **9** | **10** | **15** | **4** | **24** |
| Day 48August 30th | **0** | **0** | **6** | **16** | **4** | **18** | **24** |
| Day 51September 2nd | **0** | **0** | **0** | **0** | **3** | **29** | **26** |
| Day 55September 6th  | **2** | **2** | **15** | **4** | **0** | **25** | **31** |
| Day 58September 9th  | **0** | **3** | **3** | **30** | **7** | **15** | **48** |
| Day 62September 13th  | **0** | **0** | **12** | **33** | **27** | **10** | **53** |
| Day 65September 16th |  |  |  |  |  |  |  |
| Day 69September 20th |  |  |  |  |  |  |  |
| Day 72September 23rd |  |  |  |  |  |  |  |
| Day 76September 27th  |  |  |  |  |  |  |  |
| Day 79September 30th  |  |  |  |  |  |  |  |
| Day 83October 4th  |  |  |  |  |  |  |  |
| Day 86October 7th  |  |  |  |  |  |  |  |
| Day 90October 11th  |  |  |  |  |  |  |  |
| Day 93October 14th  |  |  |  |  |  |  |  |
| Day 97October 18th  |  |  |  |  |  |  |  |
| Day 100October 21st  |  |  |  |  |  |  |  |
| Food Record | Sugar | Protein |
| August 23rd  | **13mg honey** | **69mg mealworm** |
| August 26th  |  |  |
| August 30th  | **17mg honey** | **99mg mealworm, 10mg fruit fly** |
| September 2nd |  |  |
| September 6th  | **19mg honey** | **147mg mealworm** |
| September 9th  |  |  |
| September 13th  | **42mg honey** | **15mg fruit fly, 241mg mealworm** |
| September 16th  |  |  |
| September 20th  |  |  |
| September 23rd  |  |  |
| September 27th  |  |  |
| September 30th  |  |  |
| October 4th  |  |  |
| October 7th  |  |  |
| October 11th  |  |  |
| October 14th  |  |  |
| October 18th  |  |  |
| October 21st  |  |  |

**L-010**: Caught approx. early June. First workers July 14th, kept at ~70-77° F prior to July 28th. Day 1 begins on July 14th. Temps were 86-90° F in August. Standard care. Follow-up study continued from experiment 04, piggyback data and feeding schedule refer to experiment 04 datasheet.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OR-TET-IMMI-05-07-L-010 | Egg | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | 4th Instar Larvae | Pupae | Worker |
| Day 40August 23rd | **0** | **4** | **13** | **8** | **4** | **4** | **23** |
| Day 44August 26th  | **0** | **1** | **4** | **5** | **31** | **3** | **23** |
| Day 48August 30th | **0** | **0** | **6** | **6** | **9** | **12** | **24** |
| Day 51September 2nd | **0** | **0** | **0** | **3** | **8** | **14** | **27** |
| Day 55September 6th  | **0** | **0** | **1** | **20** | **4** | **26** | **29** |
| Day 58September 9th  | **0** | **0** | **3** | **20** | **16** | **9** | **53** |
| Day 62September 13th  | **0** | **0** | **12** | **12** | **13** | **18** | **62** |
| Day 65September 16th |  |  |  |  |  |  |  |
| Day 69September 20th |  |  |  |  |  |  |  |
| Day 72September 23rd |  |  |  |  |  |  |  |
| Day 76September 27th  |  |  |  |  |  |  |  |
| Day 79September 30th  |  |  |  |  |  |  |  |
| Day 83October 4th  |  |  |  |  |  |  |  |
| Day 86October 7th  |  |  |  |  |  |  |  |
| Day 90October 11th  |  |  |  |  |  |  |  |
| Day 93October 14th  |  |  |  |  |  |  |  |
| Day 97October 18th  |  |  |  |  |  |  |  |
| Day 100October 21st  |  |  |  |  |  |  |  |
| Food Record | Sugar | Protein |
| August 23rd  | **15mg honey** | **73mg mealworm** |
| August 26th  |  |  |
| August 30th  | **17mg honey** | **84mg mealworm, 10mg fruit fly** |
| September 2nd |  |  |
| September 6th  | **19mg honey** | **140mg mealworm** |
| September 9th  |  |  |
| September 13th  | **35mg honey** | **15mg fruit fly, 273mg mealworm** |
| September 16th  |  |  |
| September 20th  |  |  |
| September 23rd  |  |  |
| September 27th  |  |  |
| September 30th  |  |  |
| October 4th  |  |  |
| October 7th  |  |  |
| October 11th  |  |  |
| October 14th  |  |  |
| October 18th  |  |  |
| October 21st  |  |  |

**L-012**: Caught approx. early June. First workers July 14th, kept at ~70-77° F prior to July 28th. Day 1 begins on July 14th. Temps were 76-85° F in August. Standard care. Follow-up study continued from experiment 04, piggyback data and feeding schedule refer to experiment 04 datasheet.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OR-TET-IMMI-05-08-L-012 | Egg | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | 4th Instar Larvae | Pupae | Worker |
| Day 40August 23rd | **8** | **4** | **2** | **0** | **2** | **9** | **14** |
| Day 44August 26th  | **0** | **0** | **0** | **4** | **4** | **4** | **19** |
| Day 48August 30th | **5** | **20** | **0** | **0** | **1** | **5** | **17** |
| Day 51September 2nd | **10** | **13** | **3** | **0** | **1** | **5** | **15(?)** |
| Day 55September 6th  | **0** | **13** | **3** | **30** | **1** | **0** | **22** |
| Day 58September 9th  | **5** | **0** | **16** | **24** | **7** | **0** | **26** |
| Day 62September 13th  | **0** | **0** | **0** | **40** | **11** | **3** | **26** |
| Day 65September 16th |  |  |  |  |  |  |  |
| Day 69September 20th |  |  |  |  |  |  |  |
| Day 72September 23rd |  |  |  |  |  |  |  |
| Day 76September 27th  |  |  |  |  |  |  |  |
| Day 79September 30th  |  |  |  |  |  |  |  |
| Day 83October 4th  |  |  |  |  |  |  |  |
| Day 86October 7th  |  |  |  |  |  |  |  |
| Day 90October 11th  |  |  |  |  |  |  |  |
| Day 93October 14th  |  |  |  |  |  |  |  |
| Day 97October 18th  |  |  |  |  |  |  |  |
| Day 100October 21st  |  |  |  |  |  |  |  |
| Food Record | Sugar | Protein |
| August 23rd  | **10mg honey** | **54mg mealworm** |
| August 26th  |  |  |
| August 30th  | **16mg honey** | **82mg mealworm, 10mg fruit fly** |
| September 2nd |  |  |
| September 6th  | **19mg honey** | **145mg mealworm** |
| September 9th  |  |  |
| September 13th  | **30mg honey** | **15mg fruit fly, 185mg mealworm** |
| September 16th  |  |  |
| September 20th  |  |  |
| September 23rd  |  |  |
| September 27th  |  |  |
| September 30th  |  |  |
| October 4th  |  |  |
| October 7th  |  |  |
| October 11th  |  |  |
| October 14th  |  |  |
| October 18th  |  |  |
| October 21st  |  |  |

**L-013**: Caught approx. early June. First workers July 14th, kept at ~70-77° F prior to July 28th. Day 1 begins on July 14th. Temps were 69-79° F in August. Standard care. Follow-up study continued from experiment 04, piggyback data and feeding schedule refer to experiment 04 datasheet.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OR-TET-IMMI-05-09-L-013 | Egg | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | 4th Instar Larvae | Pupae | Worker |
| Day 40August 23rd | **0** | **0** | **2** | **4** | **3** | **8** | **3** |
| Day 44August 26th  | **3** | **0** | **4** | **8** | **4** | **8** | **3** |
| Day 48August 30th | **0** | **0** | **0** | **0** | **2** | **15** | **7 (-2)** |
| Day 51September 2nd | **0** | **0** | **0** | **0** | **2** | **14** | **8** |
| Day 55September 6th  | **6** | **1** | **0** | **0** | **2** | **13** | **12** |
| Day 58September 9th  | **0** | **3** | **2** | **0** | **2** | **10** | **15** |
| Day 62September 13th  | **0** | **0** | **4** | **6** | **2** | **4** | **17** |
| Day 65September 16th |  |  |  |  |  |  |  |
| Day 69September 20th |  |  |  |  |  |  |  |
| Day 72September 23rd |  |  |  |  |  |  |  |
| Day 76September 27th  |  |  |  |  |  |  |  |
| Day 79September 30th  |  |  |  |  |  |  |  |
| Day 83October 4th  |  |  |  |  |  |  |  |
| Day 86October 7th  |  |  |  |  |  |  |  |
| Day 90October 11th  |  |  |  |  |  |  |  |
| Day 93October 14th  |  |  |  |  |  |  |  |
| Day 97October 18th  |  |  |  |  |  |  |  |
| Day 100October 21st  |  |  |  |  |  |  |  |
| Food Record | Sugar | Protein |
| August 23rd  | **10mg honey** | **46mg mealworm** |
| August 26th  |  |  |
| August 30th  | **17mg honey** | **65mg mealworm, 10mg fruit fly** |
| September 2nd |  |  |
| September 6th  | **21mg honey** | **146mg mealworm** |
| September 9th  |  |  |
| September 13th  | **27mg honey** | **15mg fruit fly, 172mg mealworm** |
| September 16th  |  |  |
| September 20th  |  |  |
| September 23rd  |  |  |
| September 27th  |  |  |
| September 30th  |  |  |
| October 4th  |  |  |
| October 7th  |  |  |
| October 11th  |  |  |
| October 14th  |  |  |
| October 18th  |  |  |
| October 21st  |  |  |

**L-014**: Caught approx. early June. First workers July 14th, kept at ~70-77° F prior to July 28th. Day 1 begins on July 14th. Temps were 69-79° F in August. Standard care. Follow-up study continued from experiment 04, piggyback data and feeding schedule refer to experiment 04 datasheet.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OR-TET-IMMI-05-10-L-014 | Egg | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | 4th Instar Larvae | Pupae | Worker |
| Day 40August 23rd | **0** | **0** | **5**  | **4** | **2** | **5** | **14** |
| Day 44August 26th  | **6** | **0** | **0** | **5** | **6** | **8** | **15** |
| Day 48August 30th | **5** | **1** | **0** | **6** | **6** | **6** | **16** |
| Day 51September 2nd | **0** | **1** | **4** | **10** | **6** | **6** | **16** |
| Day 55September 6th  | **0** | **0** | **9** | **5** | **2** | **10** | **20** |
| Day 58September 9th  | **5** | **11** | **4** | **4** | **0** | **17** | **16(-1)** |
| Day 62September 13th  | **0** | **0** | **4** | **9** | **8** | **14** | **19** |
| Day 65September 16th |  |  |  |  |  |  |  |
| Day 69September 20th |  |  |  |  |  |  |  |
| Day 72September 23rd |  |  |  |  |  |  |  |
| Day 76September 27th  |  |  |  |  |  |  |  |
| Day 79September 30th  |  |  |  |  |  |  |  |
| Day 83October 4th  |  |  |  |  |  |  |  |
| Day 86October 7th  |  |  |  |  |  |  |  |
| Day 90October 11th  |  |  |  |  |  |  |  |
| Day 93October 14th  |  |  |  |  |  |  |  |
| Day 97October 18th  |  |  |  |  |  |  |  |
| Day 100October 21st  |  |  |  |  |  |  |  |
| Food Record | Sugar | Protein |
| August 23rd  | **10mg honey** | **63mg mealworm** |
| August 26th  |  |  |
| August 30th  | **18mg honey** | **89mg mealworm, 10mg fruit fly** |
| September 2nd |  |  |
| September 6th  | **21mg honey** | **136mg mealworm** |
| September 9th  |  |  |
| September 13th  | **32mg honey** | **15mg fruit fly, 180mg mealworm** |
| September 16th  |  |  |
| September 20th  |  |  |
| September 23rd  |  |  |
| September 27th  |  |  |
| September 30th  |  |  |
| October 4th  |  |  |
| October 7th  |  |  |
| October 11th  |  |  |
| October 14th  |  |  |
| October 18th  |  |  |
| October 21st  |  |  |