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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** |
| 01-01-001  June 25th |  | 30+  July 5th | 5+  July 9th | 10  July 16th | 10+  July 23rd | 0  July 30th | **DEAD** | | | 84-88° F |
| 01-02-002  June 25th  **MON** |  | 30+  July 5th | 15-20  July 9th | 14  July 16th | 3  July 23rd | 0  July 30th | 3  August 6th | 5  August 10th | 0  August 20th | 84-88° F |
| 01-03-003  July 2nd | 8-10  July 5th | 20+  July 9th | **DEAD** | | | | | | | 73-83° F |
| 01-04-004  July 2nd  **MON** | 5-7  July 5th | 15-20  July 9th | 14  July 16th | 3+  July 23rd | 0  July 30th | 0  August 6th | 0  August 10th | 0  August 20th |  | 73-83° F |
| 01-05-005  July 2nd  **MON** | 12-15  July 5th | 20+  July 9th | 11  July 16th | 3+  July 23rd | 0  July 30th | 0  August 6th | 0  August 10th | 7  August 20th |  | 67-79° F |
| 03-01-007  July 8th  **SUN** |  | 6  July 20th | 40-50  July 22nd | 6  July 29th | 4  August 6th | 0  August 10th | 4  August 20th |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** |  | 23  July 20th | 6  July 24th | 3  July 31st | 11  August 7th | 2  August 10th | 7  August 20th |  |  | 67-79° F |
| 04-01-009  July 14th  First worker  **SAT** |  |  | 0  July 28th | 0  August 3rd | 3  August 7th | 0  August 10th | 0  August 20th |  |  | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT** |  |  | 0  July 28th | 0  August 3rd | 0  August 7th | 0  August 10th | 3  August 20th |  |  | 84-88° F |
| 04-03-011  July 14th Frstwrkr |  |  | 0  July 28th | **DEAD** | | | | | | 73-83° F |
| 04-04-012  July 14th  First worker  **SAT** |  |  | 0  July 28th | 0  August 3rd | 0  August 7th | 0  August 10th | 10  August 20th |  |  | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT** |  |  | 0  July 28th | 0  August 3rd | 0  August 7th | 0  August 10th | 0  August 20th |  |  | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT** |  |  | 0  July 28th | 0  August 3rd | 6  August 7th | 5  August 10th | 0  August 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** |
| 01-02-002  June 25th  **MON** |  |  |  |  |  |  |  |  |  | 84-88° F |
| 01-04-004  July 2nd  **MON** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005  July 2nd  **MON** |  |  |  |  |  |  |  |  |  | 67-79° F |
| 03-01-007  July 8th  **SUN** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** |  |  |  |  |  |  |  |  |  | 66-76° F |
| 04-01-009  July 14th  First worker  **SAT** |  |  |  |  |  |  |  |  |  | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT** |  |  |  |  |  |  |  |  |  | 84-88° F |
| 04-04-012  July 14th  First worker  **SAT** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT** |  |  |  |  |  |  |  |  |  | 67-79° F |
| 04-06-014  July 14th  First 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** |
| 01-01-001  June 25th | 11+  July 9th | Missed | 6  July 16th | 4  July 20th | 4  July 23rd | 7  July 26th | 7  July 30th | **DEAD** | | 84-88° F |
| 01-02-002  June 25th  **MON/THU** | 5+  July 9th | Missed | 7  July 16th | 12  July 20th | 9  July 23rd | 9  July 26th | 7  July 30th | 14  Aug 2nd | 14  August 6th | 84-88° F |
| 01-03-003  July 2nd | **DEAD** | | | | | | | | | 73-83° F |
| 01-04-004  July 2nd  **MON/THU** | 6  July 16th | Missed | 16  July 20th | 16  July 23rd | 11  July 26th | 14  July 30th | 11  August 6th | 9  August 9th | 15  August 10th | 73-83° F |
| 01-05-005  July 2nd  **MON/THU** | 5  July 16th | Missed | 12  July 20th | 9  July 23rd | 9  July 26th | 16  July 30th | 6  August 6th | 9  August 9th | 10  August 10th | 67-79° F |
| 03-01-007  July 8th  **SUN/WED** | 2  July 22nd | 18  July 25th | 18  July 29th | 18  August 1st | 14  August 6th | 15  August 8th | 12  August 10th |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** | 6  August 10th |  | 2  August 20th |  |  |  |  |  |  | 66-79° F |
| 04-01-009  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 6  July 28th | 2  July 31st | 9  August 3rd | 7  August 7th | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 4  July 28th | 5  July 31st | 8  August 3rd | 7  August 7th | 84-88° F |
| 04-03-011  July 14th Frstwrkr |  |  |  |  |  | 6  July 28th | 6  July 31st | **DEAD** | | 73-83° F |
| 04-04-012  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 7  July 28th | 5  July 31st | 12  August 3rd | 11  August 7th | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 10  July 28th | 11  July 31st | 11  August 3rd | 21  August 7th | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 6  July 28th | 9  July 31st | 5  August 3rd | 4  August 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** |
| 01-02-002  June 25th  **MON/THU** | 12  August 9th | 15  August 10th |  |  | 13  August 20th |  |  |  |  | 84-88° F |
| 01-04-004  July 2nd  **MON/THU** | 12  August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005  July 2nd  **MON/THU** |  |  | 4  August 20th |  |  |  |  |  |  | 67-79° F |
| 03-01-007  July 8th  **SUN/WED** | 4  August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009  July 14th  First worker  **SAT/TUES** | 13  August 10th |  |  | 15  August 20th |  |  |  |  |  | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT/TUES** | 12  August 10th |  |  | 10  August 20th |  |  |  |  |  | 84-88° F |
| 04-04-012  July 14th  First worker  **SAT/TUES** | 19  August 10th |  |  | 8  August 20th |  |  |  |  |  | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT/TUES** | 19  August 10th |  |  | 15  August 20th |  |  |  |  |  | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT/TUES** | 14  August 10th |  |  | 12  August 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** |
| 01-01-001  June 25th | 11+  July 9th | Missed | 6  July 16th | 4  July 20th | 4  July 23rd | 7  July 26th | 7  July 30th | **DEAD** | 84-88° F |
| 01-02-002  June 25th  **MON/THU** | 5+  July 9th | Missed | 7  July 16th | 12  July 20th | 9  July 23rd | 9  July 26th | 7  July 30th | 14  Aug 2nd | 14  August 6th | 84-88° F |
| 01-03-003  July 2nd | **DEAD** | 73-83° F |
| 01-04-004  July 2nd  **MON/THU** | 6  July 16th | Missed | 16  July 20th | 16  July 23rd | 11  July 26th | 14  July 30th | 11  August 6th | 9  August 9th | 15  August 10th | 73-83° F |
| 01-05-005  July 2nd  **MON/THU** | 5  July 16th | Missed | 12  July 20th | 9  July 23rd | 9  July 26th | 16  July 30th | 6  August 6th | 9  August 9th | 10  August 10th | 67-79° F |
| 03-01-007  July 8th  **SUN/WED** | 2  July 22nd | 18  July 25th | 18  July 29th | 18  August 1st | 14  August 6th | 15  August 8th | 12  August 10th |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** | 6  August 10th |  | 2  August 20th |  |  |  |  |  |  | 66-79° F |
| 04-01-009  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 6  July 28th | 2  July 31st | 9  August 3rd | 7  August 7th | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 4  July 28th | 5  July 31st | 8  August 3rd | 7  August 7th | 84-88° F |
| 04-03-011  July 14th Frstwrkr |  |  |  |  |  | 6  July 28th | 6  July 31st | **DEAD** | 73-83° F |
| 04-04-012  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 7  July 28th | 5  July 31st | 12  August 3rd | 11  August 7th | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 10  July 28th | 11  July 31st | 11  August 3rd | 21  August 7th | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 6  July 28th | 9  July 31st | 5  August 3rd | 4  August 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** |
| 01-02-002  June 25th  **MON/THU** | 12  August 9th | 15  August 10th |  |  | 13  August 20th |  |  |  |  | 84-88° F |
| 01-04-004  July 2nd  **MON/THU** | 12  August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005  July 2nd  **MON/THU** |  |  | 4  August 20th |  |  |  |  |  |  | 67-79° F |
| 03-01-007  July 8th  **SUN/WED** | 4  August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009  July 14th  First worker  **SAT/TUES** | 13  August 10th |  |  | 15  August 20th |  |  |  |  |  | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT/TUES** | 12  August 10th |  |  | 10  August 20th |  |  |  |  |  | 84-88° F |
| 04-04-012  July 14th  First worker  **SAT/TUES** | 19  August 10th |  |  | 8  August 20th |  |  |  |  |  | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT/TUES** | 19  August 10th |  |  | 15  August 20th |  |  |  |  |  | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT/TUES** | 14  August 10th |  |  | 12  August 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** |
| 01-01-001  June 25th | 11+  July 9th | Missed | 6  July 16th | 4  July 20th | 4  July 23rd | 7  July 26th | 7  July 30th | **DEAD** | 84-88° F |
| 01-02-002  June 25th  **MON/THU** | 5+  July 9th | Missed | 7  July 16th | 12  July 20th | 9  July 23rd | 9  July 26th | 7  July 30th | 14  Aug 2nd | 14  August 6th | 84-88° F |
| 01-03-003  July 2nd | **DEAD** | 73-83° F |
| 01-04-004  July 2nd  **MON/THU** | 6  July 16th | Missed | 16  July 20th | 16  July 23rd | 11  July 26th | 14  July 30th | 11  August 6th | 9  August 9th | 15  August 10th | 73-83° F |
| 01-05-005  July 2nd  **MON/THU** | 5  July 16th | Missed | 12  July 20th | 9  July 23rd | 9  July 26th | 16  July 30th | 6  August 6th | 9  August 9th | 10  August 10th | 67-79° F |
| 03-01-007  July 8th  **SUN/WED** | 2  July 22nd | 18  July 25th | 18  July 29th | 18  August 1st | 14  August 6th | 15  August 8th | 12  August 10th |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** | 6  August 10th |  | 2  August 20th |  |  |  |  |  |  | 66-79° F |
| 04-01-009  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 6  July 28th | 2  July 31st | 9  August 3rd | 7  August 7th | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 4  July 28th | 5  July 31st | 8  August 3rd | 7  August 7th | 84-88° F |
| 04-03-011  July 14th Frstwrkr |  |  |  |  |  | 6  July 28th | 6  July 31st | **DEAD** | 73-83° F |
| 04-04-012  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 7  July 28th | 5  July 31st | 12  August 3rd | 11  August 7th | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 10  July 28th | 11  July 31st | 11  August 3rd | 21  August 7th | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT/TUES** |  |  |  |  |  | 6  July 28th | 9  July 31st | 5  August 3rd | 4  August 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** |
| 01-02-002  June 25th  **MON/THU** | 12  August 9th | 15  August 10th |  |  | 13  August 20th |  |  |  |  | 84-88° F |
| 01-04-004  July 2nd  **MON/THU** | 12  August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005  July 2nd  **MON/THU** |  |  | 4  August 20th |  |  |  |  |  |  | 67-79° F |
| 03-01-007  July 8th  **SUN/WED** | 4  August 20th |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009  July 14th  First worker  **SAT/TUES** | 13  August 10th |  |  | 15  August 20th |  |  |  |  |  | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT/TUES** | 12  August 10th |  |  | 10  August 20th |  |  |  |  |  | 84-88° F |
| 04-04-012  July 14th  First worker  **SAT/TUES** | 19  August 10th |  |  | 8  August 20th |  |  |  |  |  | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT/TUES** | 19  August 10th |  |  | 15  August 20th |  |  |  |  |  | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT/TUES** | 14  August 10th |  |  | 12  August 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** |
| 01-01-001  June 25th | 5  July 16th | 3  July 20th | 0  July 23rd | 0  July 26th | 3  July 30th | **DEAD** | | | | 84-88° F |
| 01-02-002  June 25th  **MON/THU** | 3  July 16th | 3  July 20th | 1  July 23rd | 0  July 26th | 5  July 30th | 2  Aug 2nd | 2  August 6th | 0  August 9th | 0  August 10th | 84-88° F |
| 01-03-003  July 2nd | **DEAD** | | | | | | | | | 73-83° F |
| 01-04-004  July 2nd  **THU/MON** | 3  July 26th | 3  July 30th | 2  August 6th | 4  August 9th | 1  August 10th |  |  | 1  August 20th |  | 73-83° F |
| 01-05-005  July 2nd  **MON** | 3  August 6th | 5  August 9th | 3  August 10th |  |  |  |  |  |  | 67-79° F |
| 03-01-007  July 8th  **SUN/WED** | 0  August 6th | 3  August 8th | 6  August 10th |  | 0  August 20th |  |  |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009  July 14th  First worker  **SAT/TUES** |  |  |  |  | 0  July 28th | 1  July 31st | 2  August 3rd | 1  August 7th | 0  August 10th | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT/TUES** |  |  |  |  | 3  July 28th | 3  July 31st | 0  August 3rd | 0  August 7th | 0  August 10th | 84-88° F |
| 04-03-011  July 14th frstwrkr |  |  |  |  | 1  July 28th | 1  July 31st | **DEAD** | | | 73-83° F |
| 04-04-012  July 14th  First worker  **SAT/TUES** |  |  |  |  | 0  July 28th | 2  July 31st | 0  August 3rd | 0  August 7th | 0  August 10th | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT/TUES** |  |  |  |  | 1  July 28th | 3  July 31st | 0  August 3rd | 0  August 7th | 0  August 10th | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT/TUES** |  |  |  |  | 2  July 28th | 3  July 31st | 0  August 3rd | 2  August 7th | 0  August 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** |
| 01-02-002  June 25th  **MON/THU** |  |  | 2  August 20th |  |  |  |  |  |  | 84-88° F |
| 01-04-004  July 2nd  **THU/MON** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005  July 2nd  **MON** |  |  |  |  |  |  |  |  |  | 67-79° F |
| 03-01-007  July 8th  **SUN/WED** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009  July 14th  First worker  **SAT/TUES** |  |  | 6  August 20th |  |  |  |  |  |  | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT/TUES** |  |  | 5  August 20th |  |  |  |  |  |  | 84-88° F |
| 04-04-012  July 14th  First worker  **SAT/TUES** |  |  | 4  August 20th |  |  |  |  |  |  | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT/TUES** |  |  | 3  August 20th |  |  |  |  |  |  | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT/TUES** |  |  | 5  August 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** |
| 01-01-001  June 25th | 11  July 20th | 11  July 23rd | 11  July 28th | 12  July 30th | **DEAD** | | | | | 84-88° F |
| 01-02-002  June 25th  **FRI/MON** | 1  July 20th | 5  July 23rd | 7  July 28th | 7  July 30th | 7  August 3rd | 6  August 6th | 10  August 9th | 10  August 10th |  | 84-88° F |
| 01-03-003  July 2nd | **DEAD** | | | | | | | | | 73-83° F |
| 01-04-004  July 2nd  **MON** | 7  August 6th | 8  August 9th | 10  August 10th |  |  | 12  August 20th |  |  |  | 73-83° F |
| 01-05-005  July 2nd  **MON** | 4  August 9th | 5  August 10th |  |  | 7  August 20th |  |  |  |  | 67-79° F |
| 03-01-007  July 8th  **SUN** |  |  | 8  August 20th |  |  |  |  |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009  July 14th  First worker  **SAT/TUES** |  |  |  |  | 11  July 28th | 13  July 31st | 9  August 3rd | 12  August 7th | 11  August 10th | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT/TUES** |  |  |  |  | 12  July 28th | 13  July 31st | 13  August 3rd | 11  August 7th | 15  August 10th | 84-88° F |
| 04-03-011  July 14th frstwrkr |  |  |  |  | 6  July 28th | **DEAD** | | | | 73-83° F |
| 04-04-012  July 14th  First worker  **SAT/TUES** |  |  |  |  | 11  July 28th | 11  July 31st | 10  August 3rd | 10  August 7th | 10  August 10th | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT/TUES** |  |  |  |  | 7  July 28th | 7  July 31st | 8  August 3rd | 5  August 7th  (6 drowned!) | 5  August 10th | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT/TUES** |  |  |  |  | 7  July 28th | 9  July 31st | 7  August 3rd | 10  August 7th | 13  August 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** |
| 01-02-002  June 25th  **FRI/MON** |  | 17  August 20th |  |  |  |  |  |  |  | 84-88° F |
| 01-04-004  July 2nd  **MON** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 01-05-005  July 2nd  **MON** |  |  |  |  |  |  |  |  |  | 67-79° F |
| 03-01-007  July 8th  **SUN** |  |  |  |  |  |  |  |  |  | 73-83° F |
| 03-02-008  July 10th  **TUES** |  |  |  |  |  |  |  |  |  | 66-79° F |
| 04-01-009  July 14th  First worker  **SAT/TUES** |  |  | 18  August 20th |  |  |  |  |  |  | 84-88° F |
| 04-02-010  July 14th  First worker  **SAT/TUES** |  |  | 15  August 20th |  |  |  |  |  |  | 84-88° F |
| 04-04-012  July 14th  First worker  **SAT/TUES** |  |  | 13  August 20th |  |  |  |  |  |  | 73-83° F |
| 04-05-013  July 14th  First worker  **SAT/TUES** |  |  | 5  August 20th |  |  |  |  |  |  | 67-79° F |
| 04-06-014  July 14th  First worker  **SAT/TUES** |  |  | 13  August 20th |  |  |  |  |  |  | 67-79° F |

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| **Food** **→**  **ID** **↓** | **Day 1** | **Day 2** | **Day 4** | **Day 8** | **Day 11** | **Day 15** | **Day 18** | **Day 22** |
| 01-01-001  June 25th  **SUN/WED** | 3mg honey  July 22nd  Ate all | 6mg honey  1 mg fruit fly  July 23rd  Left fly; some honey | 13mg honey  2mg fruit fly  July 25th  Didn’t finish | Skip feeding  July 29th | **DEAD** | | | |
| 01-02-002  June 25th  **SUN/WED** | 3mg honey  July 22nd  Ate all | 6mg honey  1 mg fruit fly  July 23rd  Ate all | 12mg honey  2mg fruit fly  July 25th  Didn’t finish | Skip feeding  July 29th | 12mg honey  2mg fruit fly  August 1st | Keep honey  Add 2mg fruit fly\* two flies  August 3rd\* | 11mg honey  3mg flies  August 8th | 6mg honey  10mg fruit fly  August 10th |
| 01-03-003  July 2nd | **DEAD** | | | | | | | |
| 01-04-004  July 2nd  **MON/THU** | 9mg honey  1mg fruit fly  August 6th  Left some honey | | 12mg honey  2mg fruit fly  August 10th |  |  | 13mg honey  4mg fruit fly  August 19th |  |  |
| 01-05-005  July 2nd  **THU/SUN** | 3mg honey  August 9th |  |  |  | 15mg honey  5mg fruit fly  Aug 19th |  |  |  |
| 03-01-007  July 8th  **SUN** |  |  |  | 12mg honey  3mg fruit fly  August 19th |  |  |  |  |
| 03-02-008  July 10th  **TUES** |  |  |  |  |  |  |  |  |
| 04-01-009  July 14th  First worker  **SAT/TUES** | Missed, nothing fed  July 16th | Missed, nothing fed  July 17th | Missed, nothing fed  July 19th | Missed, nothing fed  July 23rd | Missed, nothing fed  July 26rd | 13mg honey  2mg fruit fly  July 28th  Day 13\*  Didn’t quite finish | 27mg honey  5mg fruit fly  August 1st  Day 17\*  This is too much honey | Keep honey  Add 2mg fruit fly\* two flies  August 3rd\* |
| 04-02-010  July 14th  First worker  **SAT/TUES** | Missed, nothing fed  July 16th | Missed, nothing fed  July 17th | Missed, nothing fed  July 19th | Missed, nothing fed  July 23rd | Missed, nothing fed  July 26rd | 12mg honey  2mg fruit fly  July 28th  Day 13\*  clean | 26mg honey  5mg fruit fly  August 1st  Day 17\* | Keep honey  Add 2mg fruit fly\* two flies  August 3rd\* |
| 04-03-011  July 14th  First worker  **SAT/TUES** | Missed, nothing fed  July 16th | Missed, nothing fed  July 17th | Missed, nothing fed  July 19th | Missed, nothing fed  July 23rd | Missed, nothing fed  July 26rd | 14mg honey  2mg fruit fly  July 28th  Day 13\* | **DEAD** | |
| 04-04-012  July 14th  First worker  **SAT/TUES** | Missed, nothing fed  July 16th | Missed, nothing fed  July 17th | Missed, nothing fed  July 19th | Missed, nothing fed  July 23rd | Missed, nothing fed  July 26rd | 14mg honey  2mg fruit fly  July 28th  Day 13\* | 27mg honey  5mg fruit fly  August 1st  Day 17\* | Keep honey  Add 2mg fruit fly\* two flies  August 3rd\* |
| 04-05-013  July 14th  First worker  **SAT/TUES** | Missed, nothing fed  July 16th | Missed, nothing fed  July 17th | Missed, nothing fed  July 19th | Missed, nothing fed  July 23rd | Missed, nothing fed  July 26rd | 14mg honey  2mg fruit fly  July 28th  Day 13\* | 27mg honey  5mg fruit fly  August 1st  Day 17\* | Keep honey  Add 2mg fruit fly\* two flies  August 3rd\* |
| 04-06-014  July 14th  First worker  **SAT/TUES** | Missed, nothing fed  July 16th | Missed, nothing fed  July 17th | Missed, nothing fed  July 19th | Missed, nothing fed  July 23rd | Missed, nothing fed  July 26rd | 13mg honey  2mg fruit fly  July 28th  Day 13\* | 27mg honey  5mg fruit fly  August 1st  Day 17\* | Keep honey  Add 2mg fruit fly\* two flies  August 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** |
| 01-02-002  June 25th  **SUN/WED** |  |  | 12mg honey  10mg fruit fly  Aug 19th |  |  |  |  |  |
| 01-04-004  July 2nd  **MON** |  |  |  |  |  |  |  |  |
| 01-05-005  July 2nd  **MON** |  |  |  |  |  |  |  |  |
| 03-01-007  July 8th  **SUN** |  |  |  |  |  |  |  |  |
| 03-02-008  July 10th  **TUES** |  |  |  |  |  |  |  |  |
| 04-01-009  July 14th  First worker  **SAT/TUES** | 1mg sug/salt\*  10mg fruit flies  August 7th  20:8:1 water, sugar, salt | 6mg honey  10mg fruit fly  August 10th |  |  | 12mg honey  10mg fruit fly  Aug 19th |  |  |  |
| 04-02-010  July 14th  First worker  **SAT/TUES** | 1mg sug/salt\*  10mg fruit flies  August 7th  20:8:1 water, sugar, salt | 6mg honey  10mg fruit fly  August 10th |  |  | 12mg honey  10mg fruit fly  Aug 19th |  |  |  |
| 04-04-012  July 14th  First worker  **SAT/TUES** | 1mg sug/salt\*  10mg fruit flies  August 7th  20:8:1 water, sugar, salt | 6mg honey  10mg fruit fly  August 10th |  |  | 12mg honey  10mg fruit fly  Aug 19th |  |  |  |
| 04-05-013  July 14th  First worker  **SAT/TUES** | 1mg sug/salt\*  10mg fruit flies  August 7th  20:8:1 water, sugar, salt | 6mg honey  10mg fruit fly  August 10th |  |  | 12mg honey  10mg fruit fly  Aug 19th |  |  |  |
| 04-06-014  July 14th  First worker  **SAT/TUES** | 1mg sug/salt\*  10mg fruit flies  August 7th  20:8:1 water, sugar, salt | 6mg honey  10mg fruit fly  August 10th |  |  | 11mg honey  10mg fruit fly  Aug 19th |  |  |  |
| **Notes: All protein sources to be dipped in boiling water for 30 seconds prior to weighing and feeding.** | | | | | | | | |

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| **Quality Control July** | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am | 6am | 12pm | 6pm | 12am |
| Dummy tube  88-93° 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 tube  88-93° 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 tube  88-93° 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 tube  88-93° 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 tube  88-93° 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 tube  88-93° 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** |
| Humidity  88-93° 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.

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| OR-TET-IMMI-05-01-L-002 | Egg | | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | | 4th Instar Larvae | Pupae | Worker |
| Day 59  August 23rd | **0** | | **2** | **2** | **7** | | **3** | **4** | **22** |
| Day 63  August 26th | **0** | | **3** | **0** | **9** | | **0** | **7** | **23** |
| Day 67  August 30th | **0** | | **0** | **3** | **10** | | **7** | **8** | **24** |
| Day 70  September 2nd | **0** | | **0** | **2** | **5** | | **4** | **12** | **27** |
| Day 74  September 6th | **0** | | **0** | **7** | **13** | | **5** | **8** | **31** |
| Day 77  September 9th | **0** | | **2** | **12** | **8** | | **8** | **11** | **39** |
| Day 81  September 13th | **0** | | **0** | **8** | **13** | | **14** | **13** | **51** |
| Day 84  September 16th |  | |  |  |  | |  |  |  |
| Day 88  September 20th |  | |  |  |  | |  |  |  |
| Day 91  September 23rd |  | |  |  |  | |  |  |  |
| Day 95  September 27th |  | |  |  |  | |  |  |  |
| Day 98  September 30th |  | |  |  |  | |  |  |  |
| Day 102  October 4th |  | |  |  |  | |  |  |  |
| Day 105  October 7th |  | |  |  |  | |  |  |  |
| Day 109  October 11th |  | |  |  |  | |  |  |  |
| Day 112  October 14th |  | |  |  |  | |  |  |  |
| Day 116  October 18th |  | |  |  |  | |  |  |  |
| Day 119  October 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.

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| OR-TET-IMMI-05-02-L-004 | Egg | | 1st Instar Larvae | 2nd Instar Larvae | 3rd Instar Larvae | | 4th Instar Larvae | Pupae | Worker |
| Day 49  August 23rd | **0** | | **6** | **3** | **6** | | **1** | **1** | **12** |
| Day 53  August 26th | **0** | | **0** | **2** | **3** | | **3** | **3** | **12** |
| Day 57  August 30th | **0** | | **0** | **3** | **3** | | **11** | **4** | **15** |
| Day 60  September 2nd | **0** | | **2** | **0** | **6** | | **8** | **6** | **15** |
| Day 64  September 6th | **3** | | **1** | **14** | **6** | | **4** | **11** | **16** |
| Day 67  September 9th | **0** | | **9** | **8** | **11** | | **2** | **8** | **22** |
| Day 71  September 13th | **0** | | **0** | **17** | **12** | | **7** | **9** | **20** |
| Day 74  September 16th |  | |  |  |  | |  |  |  |
| Day 78  September 20th |  | |  |  |  | |  |  |  |
| Day 81  September 23rd |  | |  |  |  | |  |  |  |
| Day 85  September 27th |  | |  |  |  | |  |  |  |
| Day 88  September 30th |  | |  |  |  | |  |  |  |
| Day 92  October 4th |  | |  |  |  | |  |  |  |
| Day 95  October 7th |  | |  |  |  | |  |  |  |
| Day 99  October 11th |  | |  |  |  | |  |  |  |
| Day 102  October 14th |  | |  |  |  | |  |  |  |
| Day 106  October 18th |  | |  |  |  | |  |  |  |
| Day 109  October 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 49  August 23rd | **0** | | **0** | **5** | **2** | | **3** | **0** | **8 (-2)** |
| Day 53  August 26th | **0** | | **0** | **3** | **3** | | **5** | **1** | **11** |
| Day 57  August 30th | **0** | | **0** | **5** | **7** | | **5** | **1** | **10** |
| Day 60  September 2nd | **8** | | **2** | **0** | **9** | | **3** | **0** | **9 (-1)** |
| Day 64  September 6th | **0** | | **0** | **4** | **5** | | **4** | **4** | **10** |
| Day 67  September 9th | **0** | | **0** | **0** | **6** | | **4** | **10** | **10** |
| Day 71  September 13th | **0** | | **0** | **0** | **4** | | **6** | **10** | **10** |
| Day 74  September 16th |  | |  |  |  | |  |  |  |
| Day 78  September 20th |  | |  |  |  | |  |  |  |
| Day 81  September 23rd |  | |  |  |  | |  |  |  |
| Day 85  September 27th |  | |  |  |  | |  |  |  |
| Day 88  September 30th |  | |  |  |  | |  |  |  |
| Day 92  October 4th |  | |  |  |  | |  |  |  |
| Day 95  October 7th |  | |  |  |  | |  |  |  |
| Day 99  October 11th |  | |  |  |  | |  |  |  |
| Day 102  October 14th |  | |  |  |  | |  |  |  |
| Day 106  October 18th |  | |  |  |  | |  |  |  |
| Day 109  October 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 46  August 23rd | **0 dt** | | **0 dt** | **0 dt** | **0 dt** | | **2 dt** | **1 dt** | **12** |
| Day 50  August 26th | **0 dt** | | **1** | **1** | **1** | | **4 dt** | **3 dt** | **14** |
| Day 54  August 30th | **dt** | | **dt** | **dt** | **dt** | | **4 dt** | **3 dt** | **15** |
| Day 57  September 2nd | **0** | | **0** | **5** | **5** | | **2** | **3** | **15** |
| Day 61  September 6th | **Queen dead, no more data. Workers merged w/ colony A-001** | | | | | | | | |
| Day 64  September 9th |  | |  |  |  | |  |  |  |
| Day 68  September 13th |  | |  |  |  | |  |  |  |
| Day 71  September 16th |  | |  |  |  | |  |  |  |
| Day 75  September 20th |  | |  |  |  | |  |  |  |
| Day 78  September 23rd |  | |  |  |  | |  |  |  |
| Day 82  September 27th |  | |  |  |  | |  |  |  |
| Day 85  September 30th |  | |  |  |  | |  |  |  |
| Day 89  October 4th |  | |  |  |  | |  |  |  |
| Day 92  October 7th |  | |  |  |  | |  |  |  |
| Day 96  October 11th |  | |  |  |  | |  |  |  |
| Day 99  October 14th |  | |  |  |  | |  |  |  |
| Day 103  October 18th |  | |  |  |  | |  |  |  |
| Day 106  October 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 44  August 23rd | **2** | | **4** | **0** | **0** | | **0** | **0** | **0** |
| Day 48  August 26th | **1** | | **4** | **1** | **0** | | **0** | **0** | **0** |
| Day 52  August 30th | **1** | | **3** | **2** | **0** | | **0** | **1** | **0** |
| Day 55  September 2nd | **0** | | **2** | **1** | **1** | | **0** | **0** | **0** |
| Day 59  September 6th | **0** | | **0** | **3** | **1** | | **0** | **0** | **0** |
| Day 62  September 9th | **END** | | **MIXED** | **WITH** | **001** | | **AND** | **007** | **brood** |
| Day 66  September 13th |  | |  |  |  | |  |  |  |
| Day 69  September 16th |  | |  |  |  | |  |  |  |
| Day 73  September 20th |  | |  |  |  | |  |  |  |
| Day 76  September 23rd |  | |  |  |  | |  |  |  |
| Day 80  September 27th |  | |  |  |  | |  |  |  |
| Day 83  September 30th |  | |  |  |  | |  |  |  |
| Day 87  October 4th |  | |  |  |  | |  |  |  |
| Day 90  October 7th |  | |  |  |  | |  |  |  |
| Day 94  October 11th |  | |  |  |  | |  |  |  |
| Day 97  October 14th |  | |  |  |  | |  |  |  |
| Day 101  October 18th |  | |  |  |  | |  |  |  |
| Day 104  October 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 40  August 23rd | **0** | | **2** | **4** | **4** | | **5** | **4** | **22** |
| Day 44  August 26th | **0** | | **0** | **9** | **10** | | **15** | **4** | **24** |
| Day 48  August 30th | **0** | | **0** | **6** | **16** | | **4** | **18** | **24** |
| Day 51  September 2nd | **0** | | **0** | **0** | **0** | | **3** | **29** | **26** |
| Day 55  September 6th | **2** | | **2** | **15** | **4** | | **0** | **25** | **31** |
| Day 58  September 9th | **0** | | **3** | **3** | **30** | | **7** | **15** | **48** |
| Day 62  September 13th | **0** | | **0** | **12** | **33** | | **27** | **10** | **53** |
| Day 65  September 16th |  | |  |  |  | |  |  |  |
| Day 69  September 20th |  | |  |  |  | |  |  |  |
| Day 72  September 23rd |  | |  |  |  | |  |  |  |
| Day 76  September 27th |  | |  |  |  | |  |  |  |
| Day 79  September 30th |  | |  |  |  | |  |  |  |
| Day 83  October 4th |  | |  |  |  | |  |  |  |
| Day 86  October 7th |  | |  |  |  | |  |  |  |
| Day 90  October 11th |  | |  |  |  | |  |  |  |
| Day 93  October 14th |  | |  |  |  | |  |  |  |
| Day 97  October 18th |  | |  |  |  | |  |  |  |
| Day 100  October 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 40  August 23rd | **0** | | **4** | **13** | **8** | | **4** | **4** | **23** |
| Day 44  August 26th | **0** | | **1** | **4** | **5** | | **31** | **3** | **23** |
| Day 48  August 30th | **0** | | **0** | **6** | **6** | | **9** | **12** | **24** |
| Day 51  September 2nd | **0** | | **0** | **0** | **3** | | **8** | **14** | **27** |
| Day 55  September 6th | **0** | | **0** | **1** | **20** | | **4** | **26** | **29** |
| Day 58  September 9th | **0** | | **0** | **3** | **20** | | **16** | **9** | **53** |
| Day 62  September 13th | **0** | | **0** | **12** | **12** | | **13** | **18** | **62** |
| Day 65  September 16th |  | |  |  |  | |  |  |  |
| Day 69  September 20th |  | |  |  |  | |  |  |  |
| Day 72  September 23rd |  | |  |  |  | |  |  |  |
| Day 76  September 27th |  | |  |  |  | |  |  |  |
| Day 79  September 30th |  | |  |  |  | |  |  |  |
| Day 83  October 4th |  | |  |  |  | |  |  |  |
| Day 86  October 7th |  | |  |  |  | |  |  |  |
| Day 90  October 11th |  | |  |  |  | |  |  |  |
| Day 93  October 14th |  | |  |  |  | |  |  |  |
| Day 97  October 18th |  | |  |  |  | |  |  |  |
| Day 100  October 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 40  August 23rd | **8** | | **4** | **2** | **0** | | **2** | **9** | **14** |
| Day 44  August 26th | **0** | | **0** | **0** | **4** | | **4** | **4** | **19** |
| Day 48  August 30th | **5** | | **20** | **0** | **0** | | **1** | **5** | **17** |
| Day 51  September 2nd | **10** | | **13** | **3** | **0** | | **1** | **5** | **15(?)** |
| Day 55  September 6th | **0** | | **13** | **3** | **30** | | **1** | **0** | **22** |
| Day 58  September 9th | **5** | | **0** | **16** | **24** | | **7** | **0** | **26** |
| Day 62  September 13th | **0** | | **0** | **0** | **40** | | **11** | **3** | **26** |
| Day 65  September 16th |  | |  |  |  | |  |  |  |
| Day 69  September 20th |  | |  |  |  | |  |  |  |
| Day 72  September 23rd |  | |  |  |  | |  |  |  |
| Day 76  September 27th |  | |  |  |  | |  |  |  |
| Day 79  September 30th |  | |  |  |  | |  |  |  |
| Day 83  October 4th |  | |  |  |  | |  |  |  |
| Day 86  October 7th |  | |  |  |  | |  |  |  |
| Day 90  October 11th |  | |  |  |  | |  |  |  |
| Day 93  October 14th |  | |  |  |  | |  |  |  |
| Day 97  October 18th |  | |  |  |  | |  |  |  |
| Day 100  October 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 40  August 23rd | **0** | | **0** | **2** | **4** | | **3** | **8** | **3** |
| Day 44  August 26th | **3** | | **0** | **4** | **8** | | **4** | **8** | **3** |
| Day 48  August 30th | **0** | | **0** | **0** | **0** | | **2** | **15** | **7 (-2)** |
| Day 51  September 2nd | **0** | | **0** | **0** | **0** | | **2** | **14** | **8** |
| Day 55  September 6th | **6** | | **1** | **0** | **0** | | **2** | **13** | **12** |
| Day 58  September 9th | **0** | | **3** | **2** | **0** | | **2** | **10** | **15** |
| Day 62  September 13th | **0** | | **0** | **4** | **6** | | **2** | **4** | **17** |
| Day 65  September 16th |  | |  |  |  | |  |  |  |
| Day 69  September 20th |  | |  |  |  | |  |  |  |
| Day 72  September 23rd |  | |  |  |  | |  |  |  |
| Day 76  September 27th |  | |  |  |  | |  |  |  |
| Day 79  September 30th |  | |  |  |  | |  |  |  |
| Day 83  October 4th |  | |  |  |  | |  |  |  |
| Day 86  October 7th |  | |  |  |  | |  |  |  |
| Day 90  October 11th |  | |  |  |  | |  |  |  |
| Day 93  October 14th |  | |  |  |  | |  |  |  |
| Day 97  October 18th |  | |  |  |  | |  |  |  |
| Day 100  October 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 40  August 23rd | **0** | | **0** | **5** | **4** | | **2** | **5** | **14** |
| Day 44  August 26th | **6** | | **0** | **0** | **5** | | **6** | **8** | **15** |
| Day 48  August 30th | **5** | | **1** | **0** | **6** | | **6** | **6** | **16** |
| Day 51  September 2nd | **0** | | **1** | **4** | **10** | | **6** | **6** | **16** |
| Day 55  September 6th | **0** | | **0** | **9** | **5** | | **2** | **10** | **20** |
| Day 58  September 9th | **5** | | **11** | **4** | **4** | | **0** | **17** | **16(-1)** |
| Day 62  September 13th | **0** | | **0** | **4** | **9** | | **8** | **14** | **19** |
| Day 65  September 16th |  | |  |  |  | |  |  |  |
| Day 69  September 20th |  | |  |  |  | |  |  |  |
| Day 72  September 23rd |  | |  |  |  | |  |  |  |
| Day 76  September 27th |  | |  |  |  | |  |  |  |
| Day 79  September 30th |  | |  |  |  | |  |  |  |
| Day 83  October 4th |  | |  |  |  | |  |  |  |
| Day 86  October 7th |  | |  |  |  | |  |  |  |
| Day 90  October 11th |  | |  |  |  | |  |  |  |
| Day 93  October 14th |  | |  |  |  | |  |  |  |
| Day 97  October 18th |  | |  |  |  | |  |  |  |
| Day 100  October 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 | |  | | | |  | | | | |