|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Observed power analyses: Colony size and nest properties** | | | | |
| **Nest property** | *β a* | *CIlow b* | *CIhigh*c | *Power* d |
| **Brood** |  |  |  |  |
| *Moderate effect* |  |  |  |  |
| Wall weight | 0.012 | 75.96 | 87.06 | 82.00 |
| Wall length | 0.83 | 74.32 | 85.75 | 80.50 |
| Wall area | 16 | 71.08 | 83.09 | 77.50 |
| Wall density | 3.6E-06 | 74.87 | 86.19 | 81.00 |
| Wall composition | 1.5E-03 | 72.15 | 83.98 | 78.50 |
| Internal nest area | 17 | 79.50 | 84/87 | 79.50 |
| *High effect* |  |  |  |  |
| Wall weight | 0.019 | 97.25 | 99.99 | 99.50 |
| Wall length | 1.3 | 98.17 | 100.00 | 100.00 |
| Wall area | 26 | 97.25 | 99.99 | 99.50 |
| Wall density | 5.8E-06 | 98.17 | 100.00 | 100.00 |
| Wall composition | 2.4E-03 | 98.17 | 100.00 | 100.00 |
| Internal nest area | 27 | 97.25 | 99.99 | 99.50 |
| **Workers** |  |  |  |  |
| *Moderate effect* |  |  |  |  |
| Wall weight | 0.012 | 56.93 | 70.65 | 64.00 |
| Wall length | 0.85 | 70.54 | 82.64 | 77.00 |
| Wall area | 16 | 67.34 | 79.93 | 74.00 |
| Wall density | 3.7E-06 | 74.32 | 85.75 | 80.50 |
| Wall composition | 1.4E-03 | 71.61 | 83.54 | 78.00 |
| Internal nest area | 17 | 71.08 | 83.09 | 77.50 |
| *High effect* |  |  |  |  |
| Wall weight | 0.019 | 94.96 | 99.45 | 98.00 |
| Wall length | 1.4 | 95.68 | 99.69 | 98.50 |
| Wall area | 26 | 95.68 | 99.69 | 98.50 |
| Wall density | 6.0E-06 | 97.25 | 99.99 | 99.50 |
| Wall composition | 2.3E-03 | 97.25 | 99.99 | 99.50 |
| Internal nest area | 27 | 93.58 | 98.89 | 97.00 |
| Test Statistics: |  |  |  |  |
| Number of obs: 35  Simulations: 200; alpha = 0.05  a Observed effect size  b Low confidence interval (%)  c High confidence interval (%)  d Statistical power (%) | | | | |