

Table S1. The percentage of infested cells with the varroa mite in the experimental and control groups and different periods, following the brood treatment with formic acid 65% applied by brushing procedure.

| Groups | The percentage of infested cells | | | | | | | | |
|------------------------------|----------------------------------|------------|-------------|----------|------------|-------------|------------|------------|-------------|
| | T1 | | | T2 | | | T3 Control | | |
| Evaluated colonies & periods | 5-8 July | 20-22 July | 16-18 | 5-8 July | 20-22 July | 16-18 | 5-8 July | 20-22 July | 16-18 |
| | 2021 | 2021 | August 2021 | 2021 | 2021 | August 2021 | 2021 | 2021 | August 2021 |
| 1 | 1.75 | 2.25 | 3.5 | 0.25 | 0 | 1.5 | 9.25 | 4 | 4 |
| 2 | 1.25 | 0.5 | 2.5 | 1.75 | 2.5 | 3.75 | 7.25 | 8 | 15.5 |
| 3 | 0.25 | 0.75 | 4.25 | 1 | 0.25 | 2.25 | 2.75 | 5.75 | 7.75 |
| 4 | 2.5 | 1.75 | 4.5 | 0.25 | 2.25 | 4.5 | 4.5 | 7.75 | 9.5 |
| 5 | 1.25 | 3.75 | 6 | 1.5 | 1.75 | 4.5 | 11.25 | 9.75 | 15 |
| 6 | 1.75 | 1.5 | 3.5 | 0.25 | 2 | 4 | 7.25 | 10 | 7.75 |
| 7 | 0.5 | 1.75 | 3 | 1 | 1.25 | 3.75 | 7 | 6.75 | 3.5 |
| 8 | 0.75 | 1 | 3.25 | 0.5 | 0.25 | 0.75 | 5 | 6.5 | 9.75 |
| 9 | 1 | 2 | 5 | 2 | 2.75 | 4 | 5.25 | 7.5 | 12.25 |
| 10 | 3 | 2.5 | 6.5 | 0.75 | 2.5 | 3.5 | 7.5 | 6.5 | 7.75 |

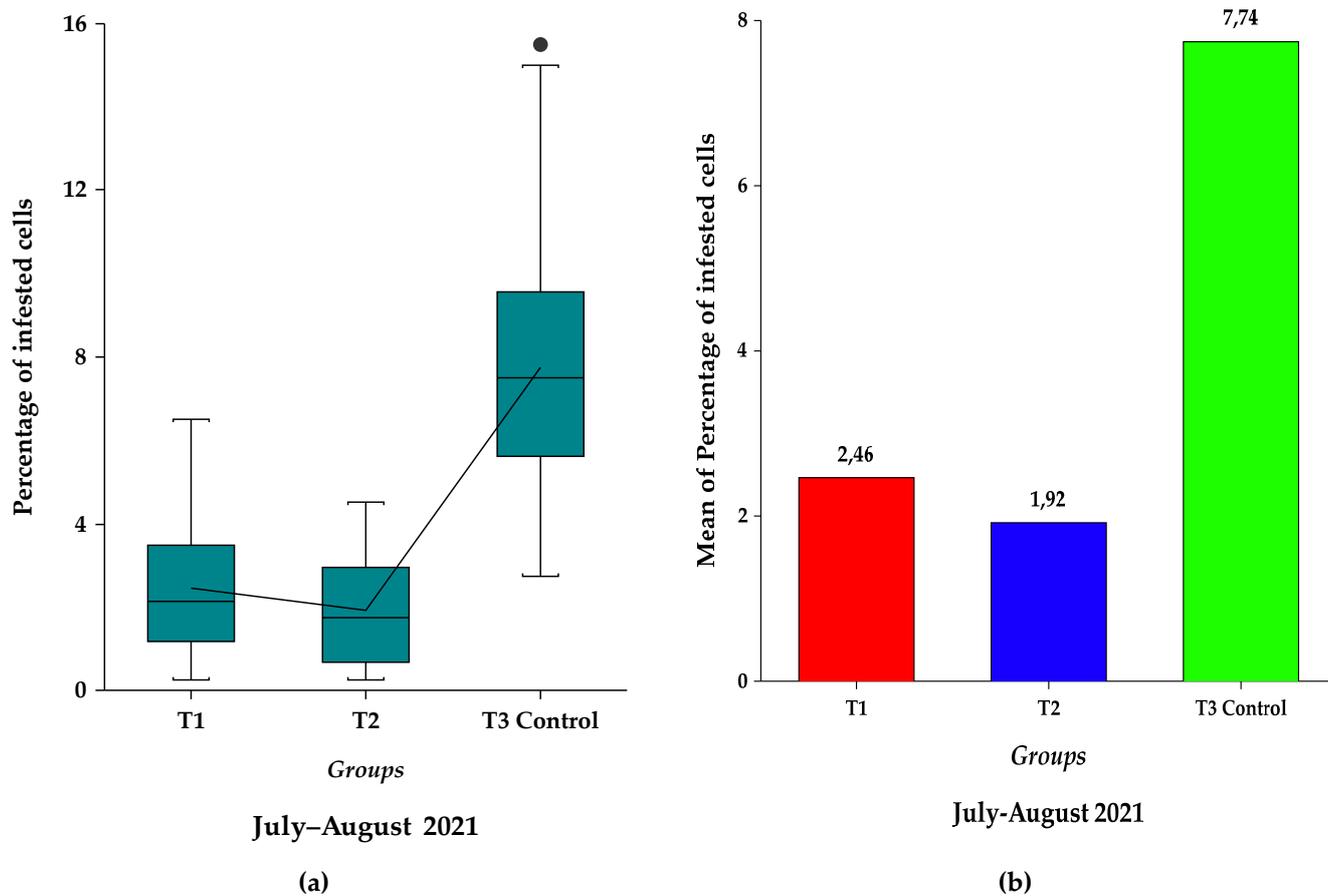


Figure S1 (a): A general overview of the box plotted data on the percentage of varroa mite infested cells evaluated in different experimental groups (T1, T2, T3 Control) in the whole evaluation period: July–August 2021. **(b)** The mean percentage of varroa mite infested cells evaluated in different experimental groups (T1, T2, T3 Control) in the whole evaluation period: July–August 2021.