

Figure 2. Foraging throughout the season

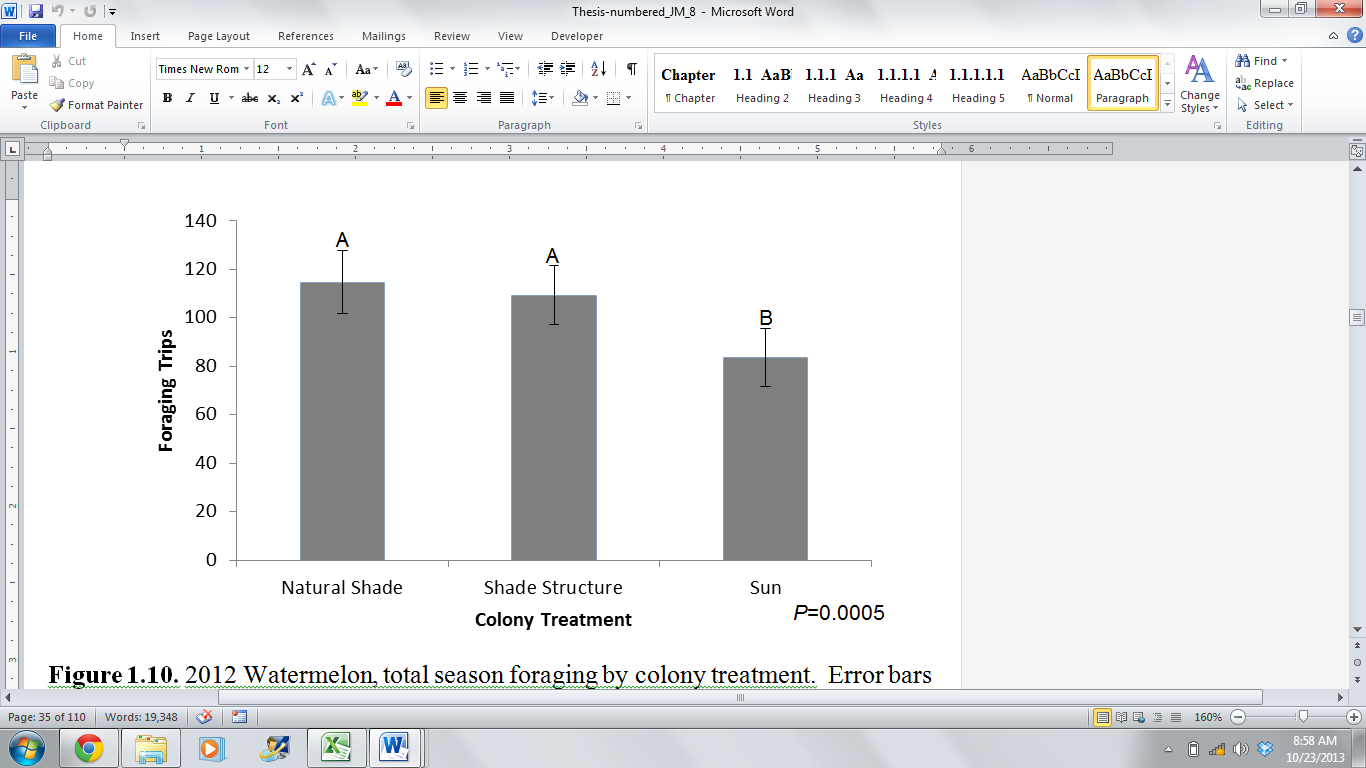


Figure 3. Season long foraging

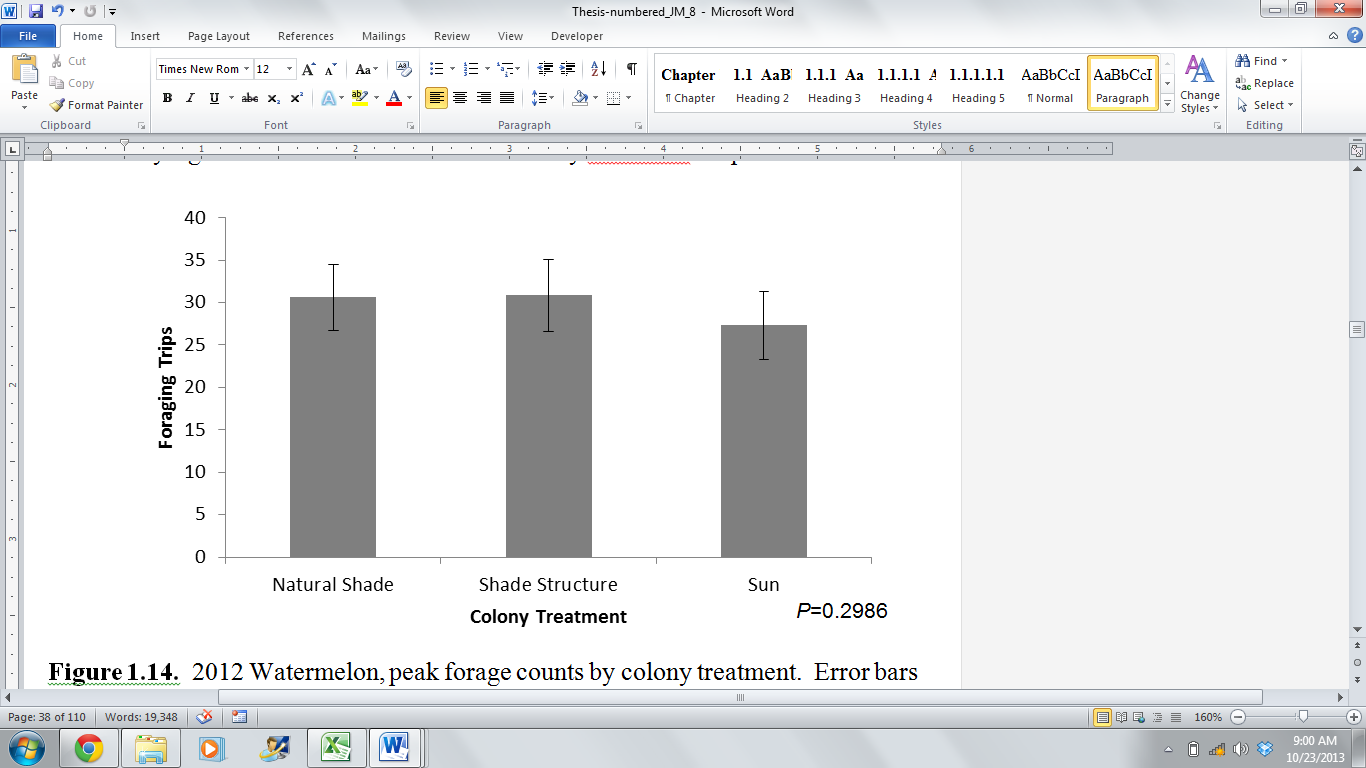


Figure 4. Peak recorded foraging

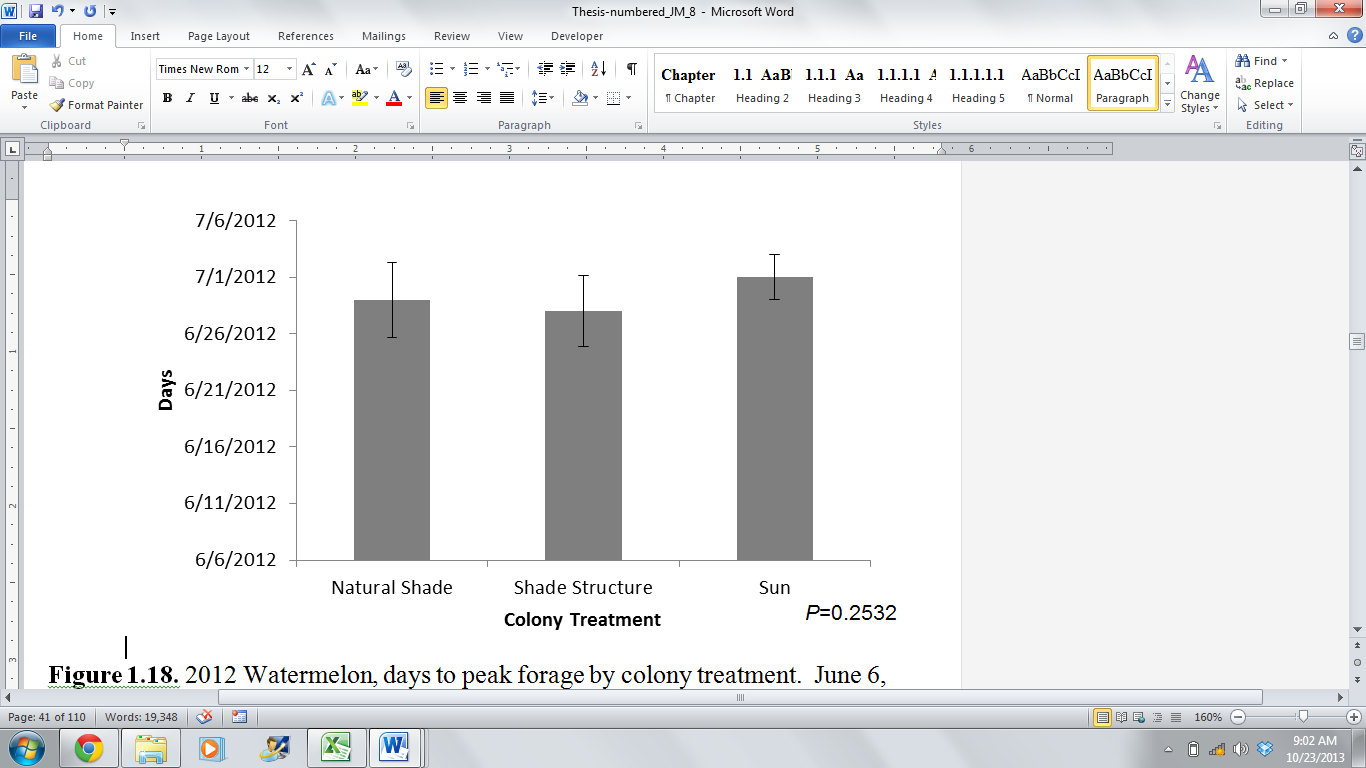


Figure 5. Day of peak season foraging

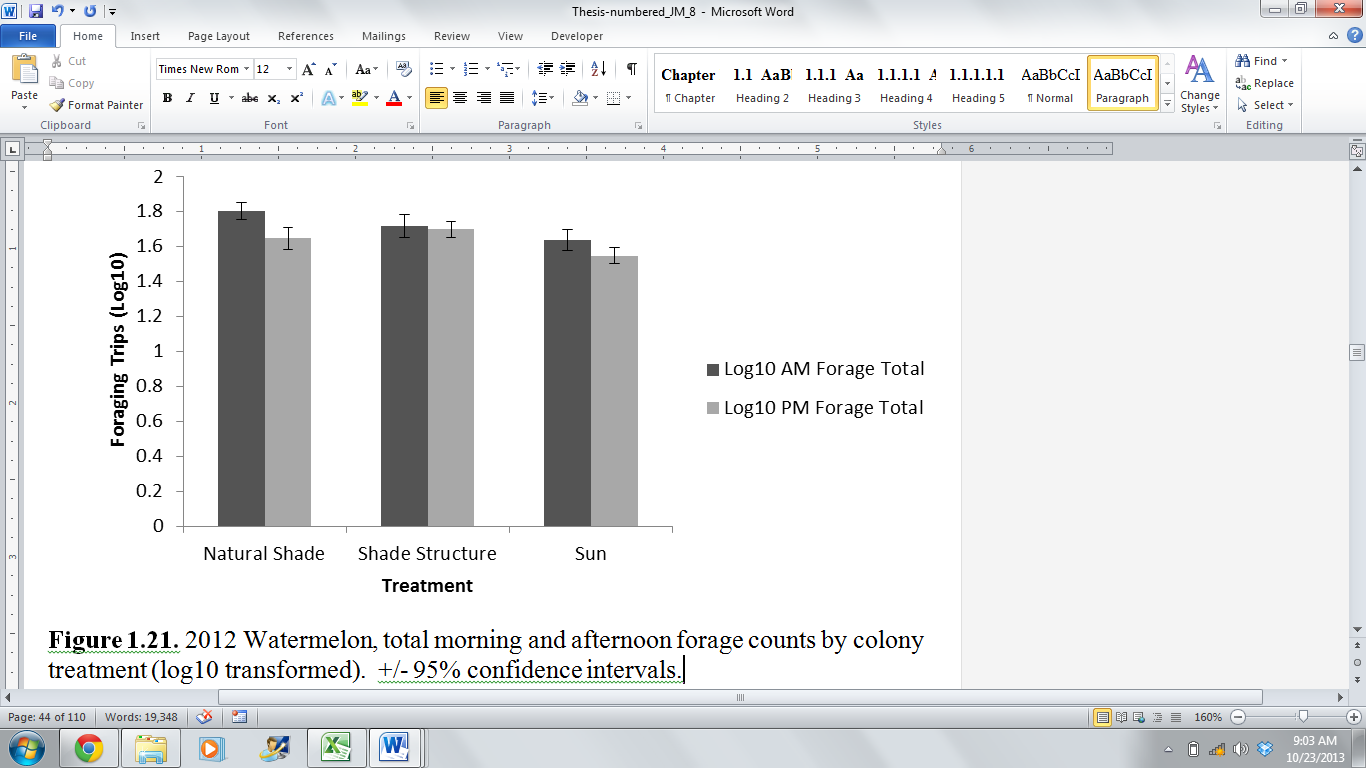


Figure 6. Season long morning and afternoon forage counts (log 10)

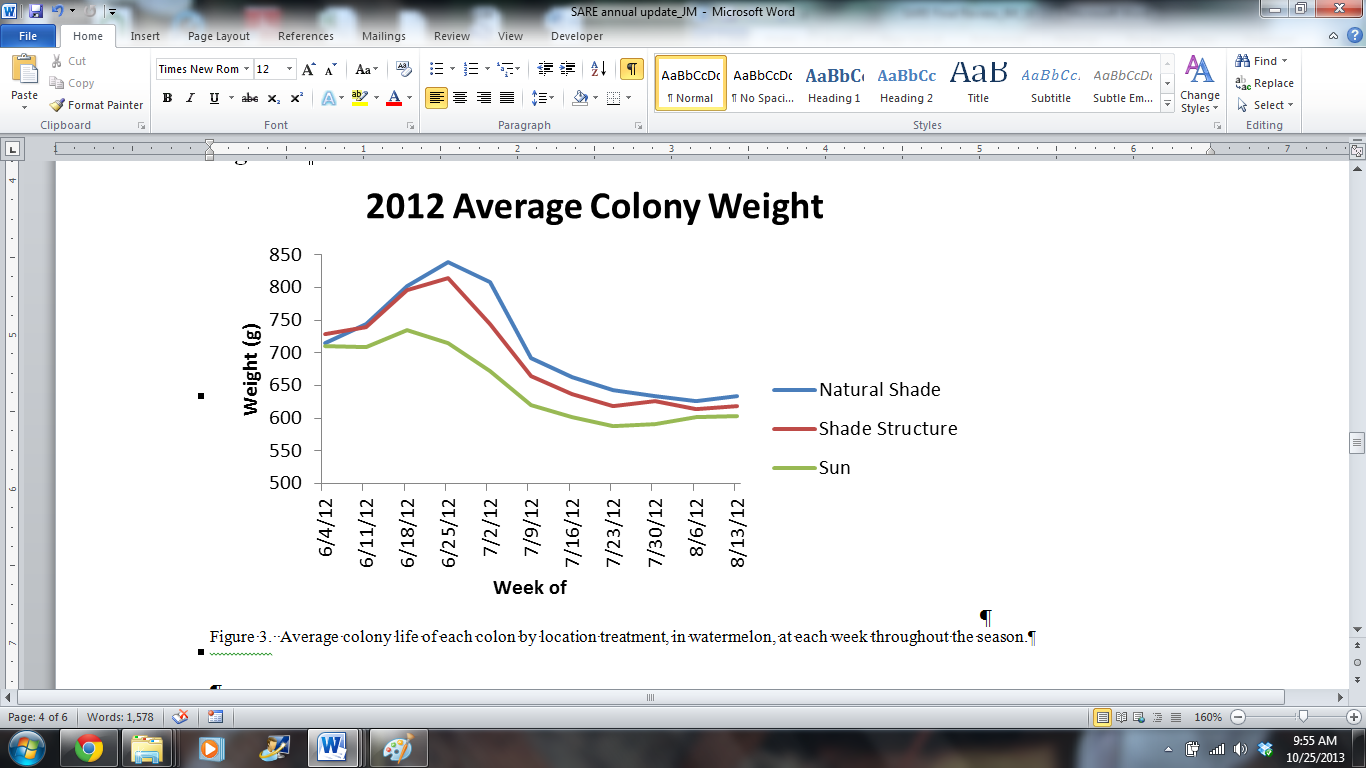


Figure 7. Colony weight throughout the season

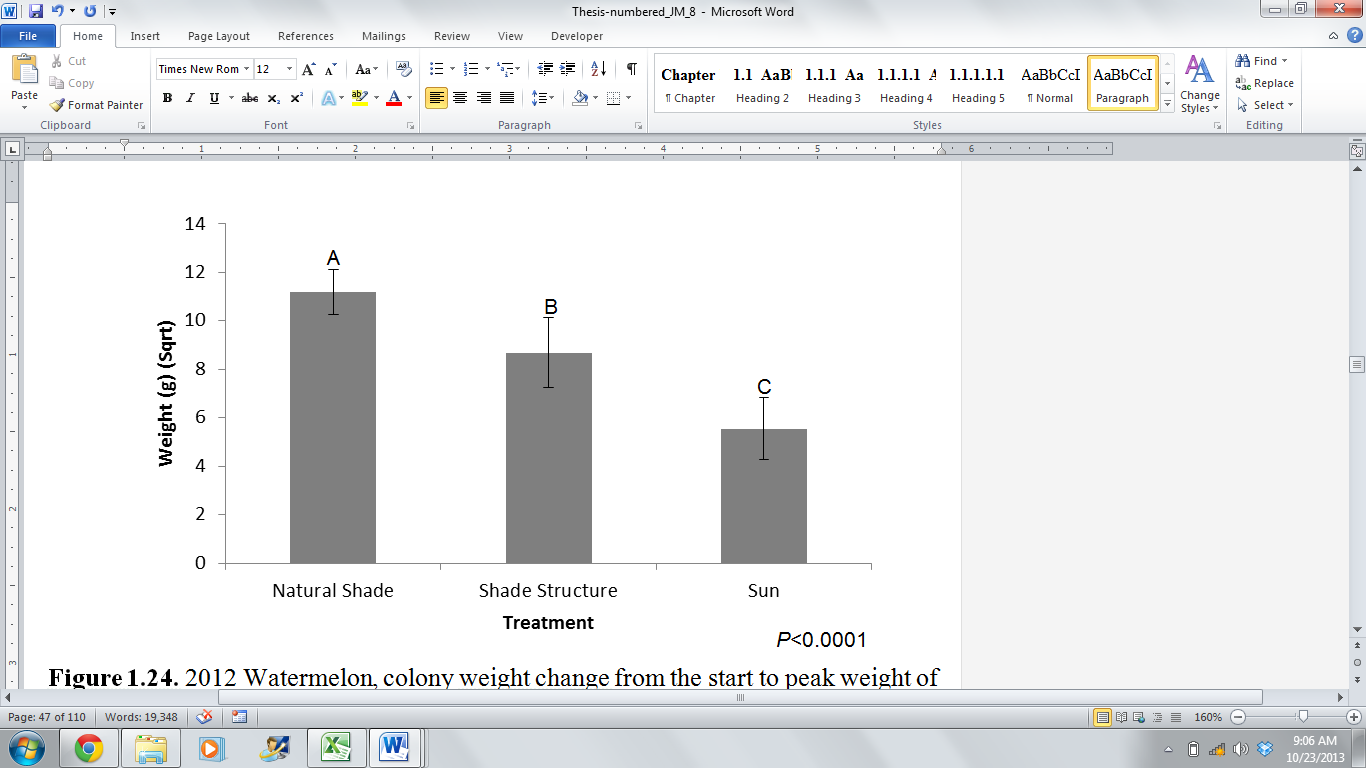


Figure 8. Colony weight change from start to peak of season

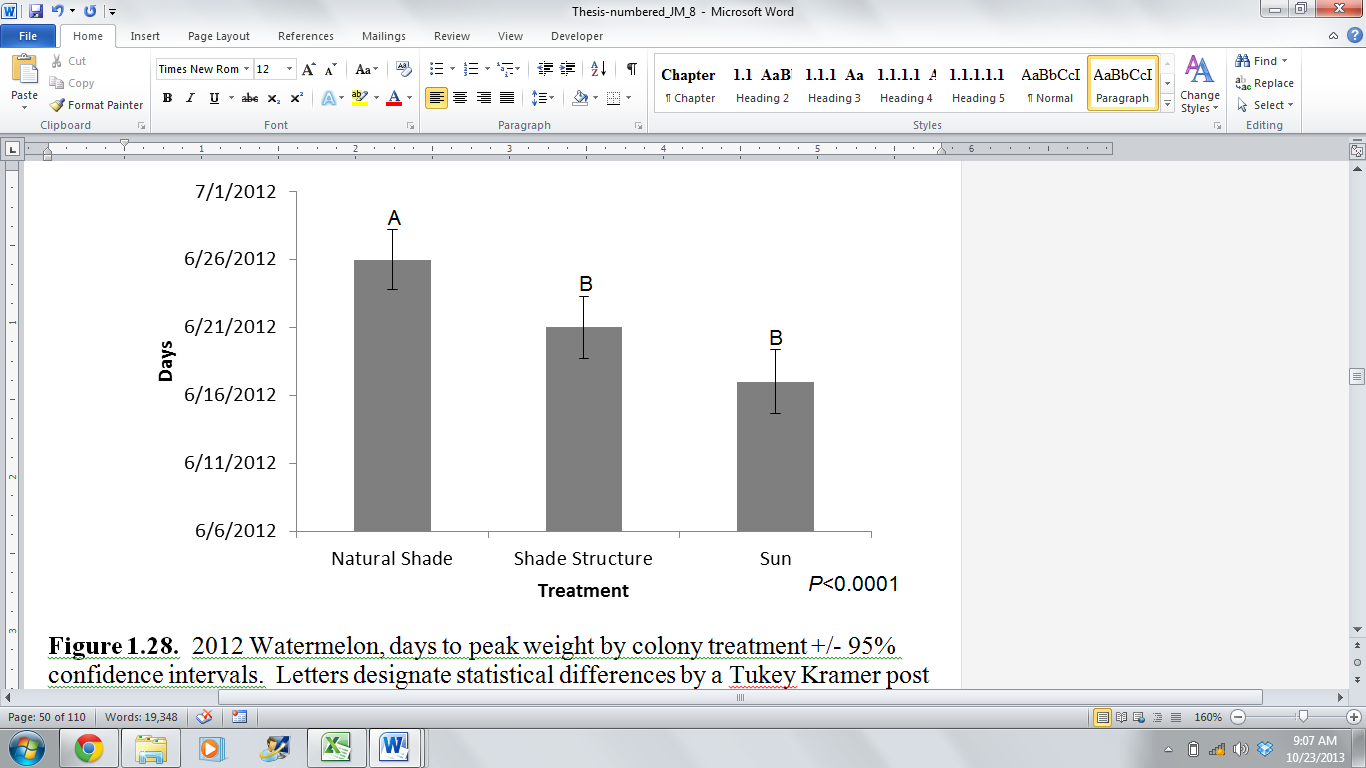


Figure 9. Day of peak weight

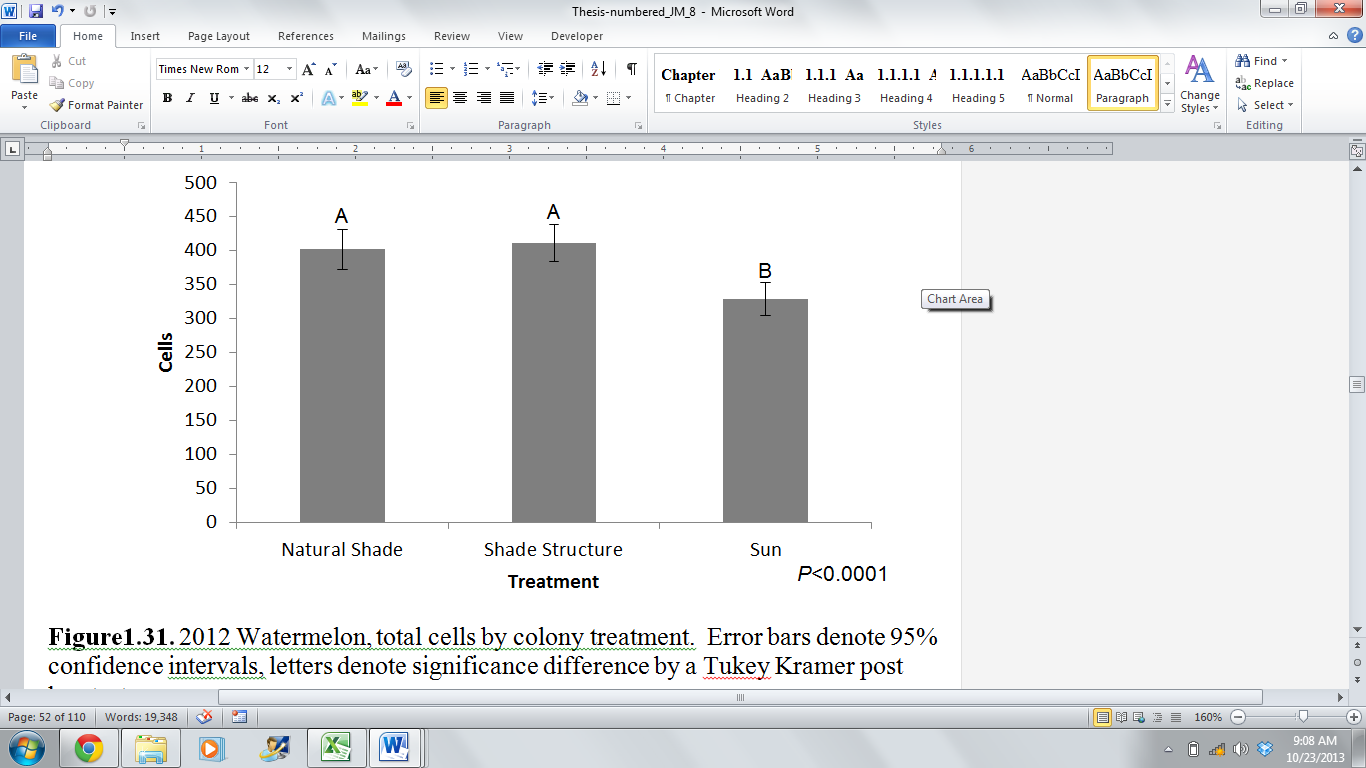


Figure 10. Total cells found in colony post mortem analysis

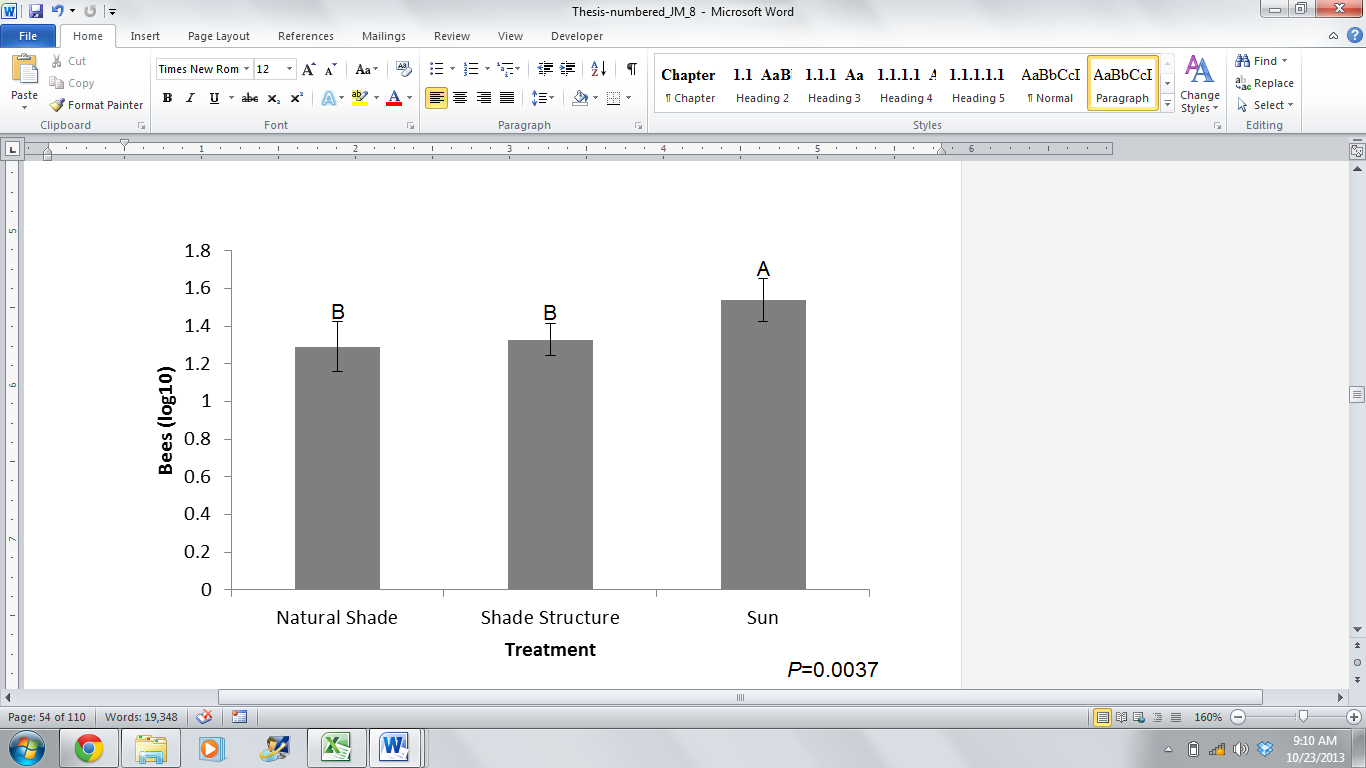


Figure 11. Total bees found in colony post mortem analysis

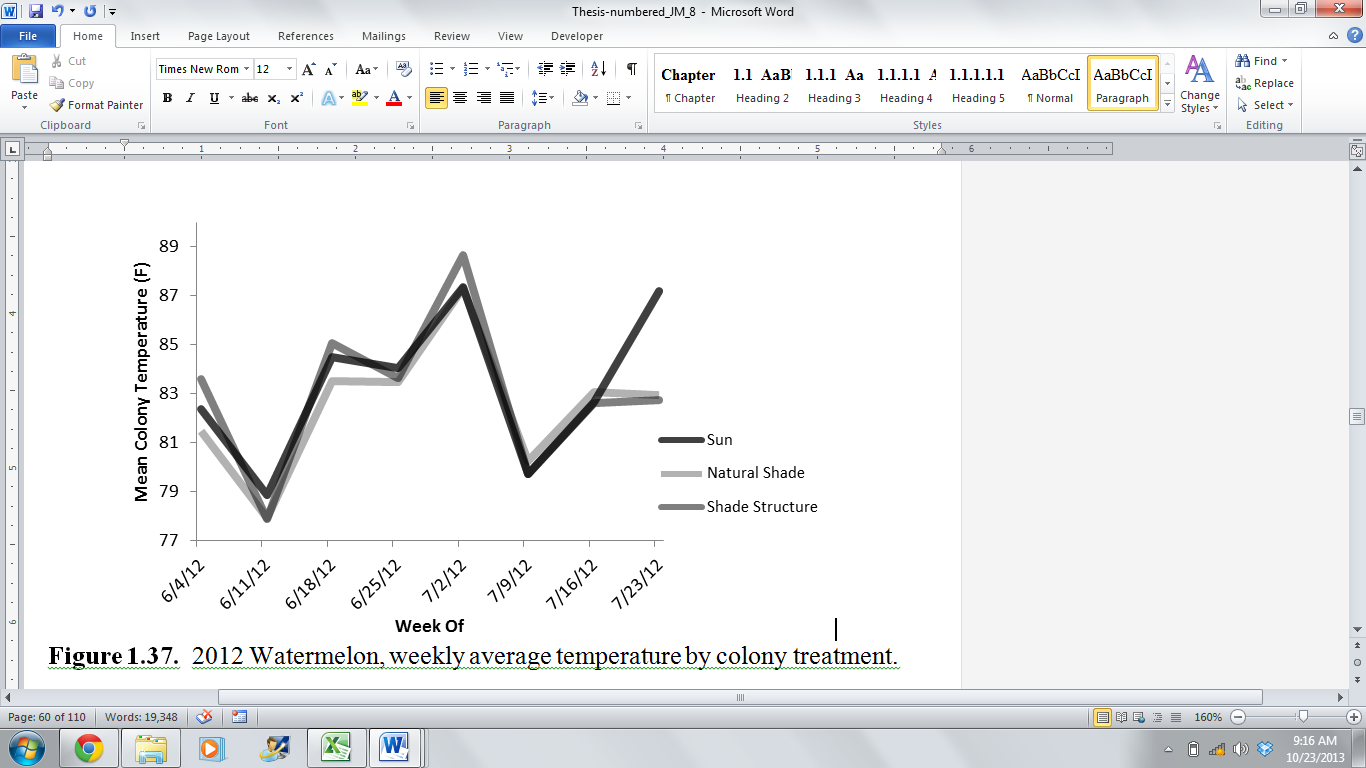


Figure 12. Average weekly colony temperature

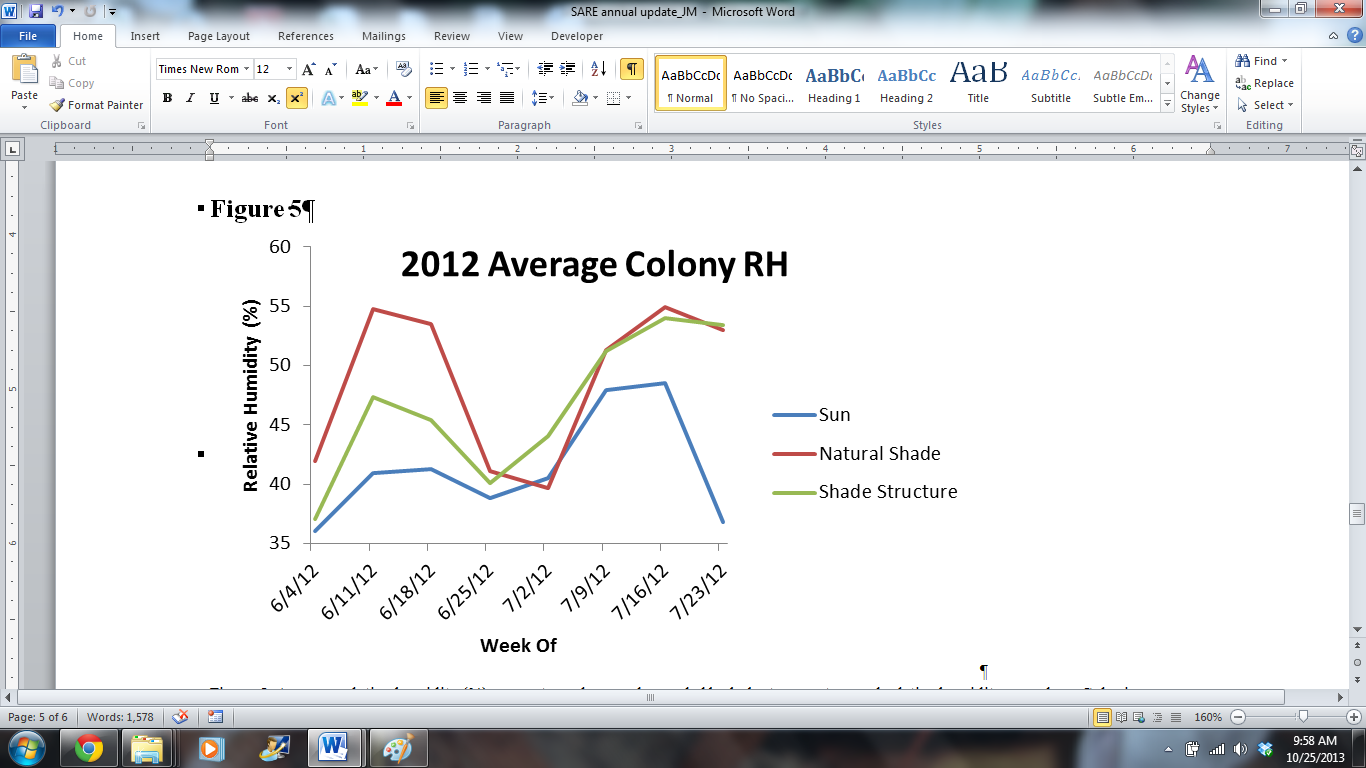


Figure 13. Colony relative humidity throughout season

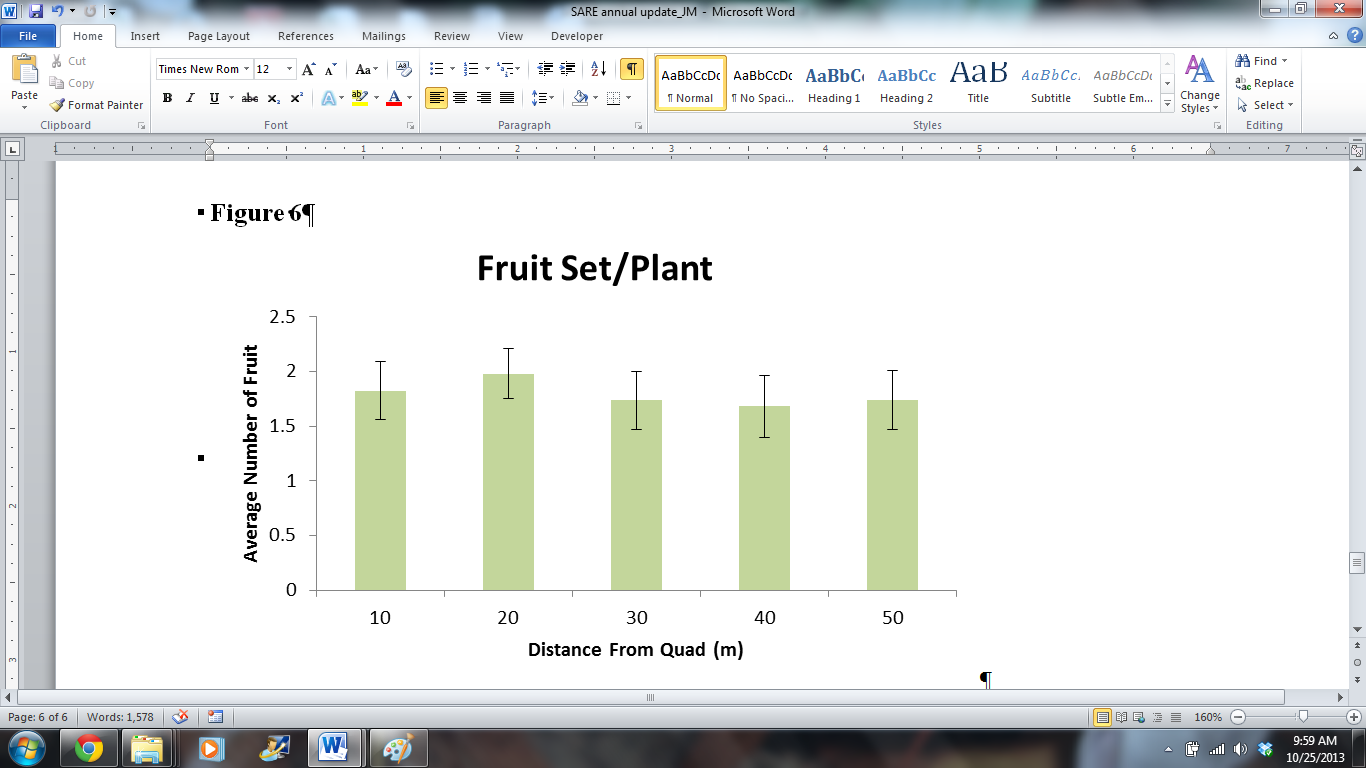


Figure 14. Fruit set by distance from group of four colonies (quad)

Table 1. List of pesticides detected in bees and wax samples in ppb concentrations in 2012. All values in parentheses indicate honey bee LD50 from PPDB unless otherwise indicated. - = no detection, 2 = Thompson 2001, 3=Mullin et al. 2010, / = bumble bee LD50.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Crop** | Watermelon | | Pickling  Cucumber | | Strawberry | |
| **Field** | **3** | **3** | **2** | **2** | **1** | **1** |
| **Substrate** | **Bees** | **Wax** | **Bees** | **Wax** | **Bees** | **Wax** |
| **Chemical (concs in ppb) (LD50)** |  | | | | | |
| Azoxystrobin *(25,000) 48 hour oral* | - | - | 73.4 | - | 103 | 2970 |
| Bifenthrin *(150)3* | 7.8 | - | - | - | - | 31.2 |
| Boscalid *(1,550,000)3* | - | - | - | - | 70 | 79.5 |
| Captan *(100000) 48 hour oral* | - | - | - | - | - | 2440 |
| Carbendazim *(>500,000) 48 hour contact* | - | - | - | - | - | 20.1 |
| Chlorfenapyr *(120) 48 hour exposure type not reported* | 2.8 | - | - | - | - | - |
| Chlorothalonil *(40,000) 48 hour oral* | 5710 | 48700 | - | 34400 | - | 178 |
| Chlorpyrifos *(59) 48 hour contact/(11,400)2* | - | 6.2 | - | - | 5.1 | 25.5 |
| Coumaphos *(46,300)3* | - | - | - | - | - | 13.1 |
| Cyprodinil *(113,000) 48 hour oral* | 72.4 | 11.3 | - | - | 32.5 | 43.7 |
| Fenbuconazole *(1,490,000)3* | - | - | 54.8 | - | - | 16.9 |
| Fenpyroximate *(15,800) 48 hour contact* | 6.3 | - | - | - | - | - |
| Fluvalinate *(15,860)3* | - | 2.5 | - | - | - | - |
| Hydroxychlorothalonil *(not available)* | - | 196 | - | - | - | - |
| Methoxyfenozide*(>100,000) 48 hour oral* | - | - | 60 | - | - | - |
| Pendimethalin *(100,000) 48 hour contact* | 16.6 | 40.4 | - | - | 45.9 | 43.3 |
| Phosmet *(220) 48 hour contact* | - | - | - | - | 17.1 | 129 |
| Pyraclostrobin *(>73,100) 48 hour oral* | - | - | - | - | 11.2 | 19.9 |
| Tebuconazole *(>73,100) 48 hour oral* | 21.1 | 12.7 | 47 | 81.1 | - | - |
| Tebufenozide *(>234,000) 48 hour contact* | - | - | - | - | - | 103 |
| Trifloxystrobin *(>200) 48 hour oral* | - | - | - | - | - | 49.3 |