Table 1: Test for variance among families and populations

Model: Overall\_mean ~ Block + (1 | Population/Family)

| Variable | Group | Variance | PVE | p |
| --- | --- | --- | --- | --- |
| Flower size: 2020 | Family:Population | 13.251 | 34.196 | 0.362 |
| Population | 9.723 | 25.092 | 0.2645 |
| Residual | 15.776 | 40.712 |  |

Table 2: Assess how much variance is explained by urbanization

Urbanization = Distance to the City Center

Model: Overall\_mean ~ Block + (1 | Population/Family) + City\_dist

| Variable | Group | Variance | PVE | p |
| --- | --- | --- | --- | --- |
| Flower size: 2020 | Family:Population | 12.651 | 30.994 | 0.385 |
| Population | 11.111 | 27.222 | 0.258 |
| Residual | 17.054 | 41.784 |  |

Table 3: Quantify variance explained by urbanization

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Flower size: 2020 | Block | 2.007 | 0.571 |
| Distance to City Center | 0.048 | 0.827 |

Table 4: Assess how much variance is explained by urbanization

Urbanization = Urbanization Score

Model: Overall\_mean ~ Block + (1 | Population/Family) + Urb\_score

| Variable | Group | Variance | PVE | p |
| --- | --- | --- | --- | --- |
| Flower size: 2020 | Family:Population | 3.613 | 9.280 | 0.471 |
| Population | 11.175 | 28.704 | 0.25 |
| Residual | 24.145 | 62.016 |  |

Table 5: Quantify variance explained by urbanization

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Flower size: 2020 | Block | 2.916 | 0.405 |
| Urbanization Score | 0.933 | 0.334 |