Table 1: Test for variance among families and populations

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

| Variable | Group | Variance | PVE | p |
| --- | --- | --- | --- | --- |
| Flower size: 2021 | Family:Population | 1.281 | 3.920 | 0.4565 |
| Population | 5.171 | 15.819 | 0.1135 |
| Residual | 26.239 | 80.262 |  |

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: 2021 | Family:Population | 1.465 | 4.42 | 0.4505 |
| Population | 5.532 | 16.69 | 0.109 |
| Residual | 26.148 | 78.89 |  |

Table 3: Quantify variance explained by urbanization

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Flower size: 2021 | Block | 3.762 | 0.288 |
| Distance to City Center | 0.118 | 0.731 |

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: 2021 | Family:Population | 1.736 | 5.217 | 0.4395 |
| Population | 5.746 | 17.267 | 0.1 |
| Residual | 25.796 | 77.516 |  |

Table 5: Quantify variance explained by urbanization

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Flower size: 2021 | Block | 3.911 | 0.271 |
| Urbanization Score | 0.000 | 0.992 |