Table 1: Test for variance among families and populations

Model: Herbivory\_mean\_early\_binary ~ Block + (1 | Population) + (1 | Population:Fam\_uniq)

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Herbivory before flowering, binary: 2020 | Family | 0.020 | 0.589 | 2.716 | 1 | **0.0495** |
| Herbivory before flowering, binary: 2020 | Population | 0.303 | 8.439 | 0.000 | 1 | 0.5 |

Table 2: Assess how much variance is explained by urbanization

Urbanization = Distance to the City Center

Model: Herbivory\_mean\_early\_binary ~ Block + (1 | Population) + (1 | Population:Fam\_uniq) + City\_dist

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Herbivory before flowering, binary: 2020 | Family | 0.025 | 0.752 | 2.548 | 1 | 0.055 |
| Herbivory before flowering, binary: 2020 | Population | 0.294 | 8.195 | 0.000 | 1 | 0.5 |

Table 3: Quantify variance explained by urbanization

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Herbivory before flowering, binary: 2020 | Block | 1.738 | 0.629 |
| Distance to City Center | 0.985 | 0.321 |

Table 4: Assess how much variance is explained by urbanization

Urbanization = Urbanization Score

Model: Herbivory\_mean\_early\_binary ~ Block + (1 | Population) + (1 | Population:Fam\_uniq) + Urb\_score

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Herbivory before flowering, binary: 2020 | Family | 0.025 | 0.741 | 2.585 | 1 | 0.054 |
| Herbivory before flowering, binary: 2020 | Population | 0.296 | 8.252 | 0.000 | 1 | 0.5 |

Table 5: Quantify variance explained by urbanization

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Herbivory before flowering, binary: 2020 | Block | 1.732 | 0.63 |
| Urbanization Score | 0.701 | 0.402 |