Table 1: Test for variance among families and populations

Model: Total\_Height\_early^(1/3) ~ (1 | Population/Family) + Block

| Variable | Group | Variance | PVE | p |
| --- | --- | --- | --- | --- |
| Height, before flowering: 2021 | Family:Population | 0.265 | 9.227 | **0.001** |
| Population | 0.034 | 1.186 | 0.257 |
| Residual | 2.569 | 89.587 |  |

Table 2: Assess how much variance is explained by urbanization

Urbanization = Distance to the City Center

Model: Total\_Height\_early^(1/3) ~ (1 | Population/Family) + Block + City\_dist

| Variable | Group | Variance | PVE | p |
| --- | --- | --- | --- | --- |
| Height, before flowering: 2021 | Family:Population | 0.266 | 9.283 | **0.001** |
| Population | 0.027 | 0.937 | 0.303 |
| Residual | 2.570 | 89.780 |  |

Table 3: Quantify variance explained by urbanization

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Height, before flowering: 2021 | Block | 65.057 | <0.001\*\*\* |
| Distance to City Center | 1.876 | 0.171 |

Table 4: Assess how much variance is explained by urbanization

Urbanization = Urbanization Score

Model: Total\_Height\_early^(1/3) ~ (1 | Population/Family) + Block + Urb\_score

| Variable | Group | Variance | PVE | p |
| --- | --- | --- | --- | --- |
| Height, before flowering: 2021 | Family:Population | 0.265 | 9.225 | **0.001** |
| Population | 0.036 | 1.242 | 0.2485 |
| Residual | 2.569 | 89.533 |  |

Table 5: Quantify variance explained by urbanization

| Variable | Predictor | χ2 | p |
| --- | --- | --- | --- |
| Height, before flowering: 2021 | Block | 64.975 | <0.001\*\*\* |
| Urbanization Score | 0.716 | 0.397 |