Table 1: Test for variance among families and populations

Model: Scar\_binary ~ Block + (1 | Population) + (1 | Population:Fam\_uniq)

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Weevil Damage, binary: 2021 | Family | 0.024 | 0.716 | 3.135 | 1 | **0.0385** |
| Population | 0.247 | 6.990 | -0.007 | 1 | 0.5 |

Table 2: Assess how much variance is explained by urbanization

Urbanization = Distance to the City Center

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

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Weevil Damage, binary: 2021 | Family | 0.015 | 0.462 | 3.074 | 1 | **0.04** |
| Population | 0.241 | 6.819 | -0.007 | 1 | 0.5 |

Table 3: Quantify variance explained by urbanization

| Variable | Predictor | Ï‡2 | p |
| --- | --- | --- | --- |
| Weevil Damage, binary: 2021 | Block | 27.824 | **<0.001\*\*\*** |
| Distance to City Center | 0.695 | 0.404 |

Table 4: Assess how much variance is explained by urbanization

Urbanization = Urbanization Score

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

| Variable | Group | Variance | PVE | χ2 | df | p |
| --- | --- | --- | --- | --- | --- | --- |
| Weevil Damage, binary: 2021 | Family | 0.022 | 0.673 | 3.135 | 1 | **0.0385** |
| Population | 0.246 | 6.969 | -0.007 | 1 | 0.5 |

Table 5: Quantify variance explained by urbanization

| Variable | Predictor | Ï‡2 | p |
| --- | --- | --- | --- |
| Weevil Damage, binary: 2021 | Block | 27.599 | **<0.001\*\*\*** |
| Urbanization Score | 0.045 | 0.832 |