Table 1: Test for variance among families and populations

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

PVE for population: 7.68. PVE for family: 0.737

| Variable | Group | p |
| --- | --- | --- |
| Weevil Damage, binary: 2021 | Family | **0.0305** |
| Population | 0.4995 |

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

PVE for population: 7.502. PVE for family: 0.477

| Variable | Group | p |
| --- | --- | --- |
| Weevil Damage, binary: 2021 | Family | **0.032** |
| Population | 0.5 |

Table 3: Quantify variance explained by urbanization

| Variable | Predictor | Ï‡2 | p |
| --- | --- | --- | --- |
| Weevil Damage, binary: 2021 | Block | 28.785 | **<0.001\*\*\*** |
| Distance to City Center | 0.717 | 0.397 |

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

PVE for population: 7.658. PVE for family: 0.693

| Variable | Group | p |
| --- | --- | --- |
| Weevil Damage, binary: 2021 | Family | **0.0305** |
| Population | 0.5 |

Table 5: Quantify variance explained by urbanization

| Variable | Predictor | Ï‡2 | p |
| --- | --- | --- | --- |
| Weevil Damage, binary: 2021 | Block | 28.585 | **<0.001\*\*\*** |
| Urbanization Score | 0.045 | 0.831 |