

| Statistical Test | Factor/Comparison | F-value / Odds Ratio | p-value | Mean Difference (Diff) | 95% Confidence Interval (CI) | Adjusted p-value (p_{adj}) |
|---------------------|--|----------------------|-----------------------|------------------------|------------------------------|--------------------------------|
| Two-way ANOVA | Treatment effect (Salt Stress vs. Control) | 28.223 | <0.0001 | - | - | - |
| Two-way ANOVA | Root type (Taproot vs. Lateral Root) | 25.156 | <0.0001 | - | - | - |
| Two-way ANOVA | Treatment × Root Type | 2.734 | 0.0988 | - | - | - |
| Fisher's exact test | Zero Value Proportion (Salt Stress vs. Control, Lateral Roots) | 5.26 | 5.24×10^{-6} | - | - | - |
| Tukey HSD | Salt Stress: Lateral Root vs. Control: Lateral Root | - | - | -12.669 | [-17.353, -7.984] | <0.0001*** |
| Tukey HSD | Control: Taproot vs. Control: Lateral Root | - | - | -11.838 | [-16.474, -7.201] | <0.0001*** |
| Tukey HSD | Salt Stress: Taproot vs. Control: Lateral Root | - | - | -23.944 | [-32.634, -15.252] | <0.0001*** |
| Tukey HSD | Control: Taproot vs. Salt Stress: Lateral Root | - | - | 1.394 | [-7.296, 10.085] | 0.9762 |
| Tukey HSD | Salt Stress: Taproot vs. Salt Stress: Lateral Root | - | - | -7.332 | [-16.622, 1.959] | 0.1769 |
| Tukey HSD | Salt Stress: Taproot vs. Control: Taproot | - | - | -8.726 | [-17.416, -0.035] | 0.0486* |

Table S1. Summary of Statistical Analyses on Root Growth Under Salt Stress and Control Conditions in *Populus euphratica*.