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| --- | --- | --- | --- | --- | --- | --- |
| Permutational multivariate analysis of variance  adonis(TransSeedData ~ Burn\*Dune, data = SeedFactors, permutations = 999)  NMDS stress: 0.1650231 | | | | | | |
|  | **Df** | **SumsOfSqs** | **MeansSqs** | **F.Model (Pseudo-F)** | **R2** | **Pr(>F)** |
| Burn | 2 | 4.13 | 2.06498 | 6.4637 | 0.05195 | 0.001 |
| Dune | 2 | 3.635 | 1.81733 | 5.6885 | 0.04572 | 0.001 |
| Burn:Dune | 4 | 2.083 | 0.52069 | 1.6298 | 0.0262 | 0.007 |
| Residuals | 218 | 69.645 | 0.31947 | 0.87612 |  |  |
| Total | 226 | 79.493 | 1 |  |  |  |

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| Levene's Test for Homogeneity of Variance  leveneTest(fit.SWI, center = mean) | | | Shapiro-Wilk normality test  shapiro.test(residuals(fit.SWI)) | |
| **Df** | **F value** | **Pr(>F)** | **W** | **p-value** |
| **SWI** | | | | |
| 8 | 1.5315 | 0.1472 | 0.96833 | 3.65E-05 |
| **SDI** | | | | |
| 8 | 1.7508 | 0.08789 | 0.95413 | 6.95E-07 |
| **Num\_Species** | | | | |
| 8 | 5.4425 | 2.72E-06 | 0.97236 | 1.31E-04 |
| **Num\_Sp\_FrRoot** | | | | |
| 8 | 2.015 | 0.04562 | 0.79116 | < 2.20E-16 |
| **Tot\_Abundance** | | | | |
| 8 | 3.6192 | 0.0005517 | 0.53302 | < 2.20E-16 |
| **Abun\_FrRoot** | | | | |
| 8 | 1.7939 | 0.07916 | 0.97746 | 7.45E-04 |

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| Two-way analysis of variance with type III sums of squares | | | | |
|  | **Sum Sq** | **Df** | **F value** | **Pr(>F)** |
| **SWI**  fit.SWI <- lm(SWI ~ Burn\*Dune, data=glm\_df)  Anova(fit.SWI, type ='III') | | | | |
| (Intercept) | 162.026 | 1 | 602.5306 | < 2.20E-16 |
| Burn | 0.027 | 2 | 0.0497 | 0.951512 |
| Dune | 3.438 | 2 | 6.3926 | 0.001987 |
| Burn:Dune | 2.94 | 4 | 2.7334 | 0.029798 |
| Residuals | 61.849 | 230 |  |  |
| **SDI** | | | | |
| (Intercept) | 51.351 | 1 | 7.97E+02 | < 2.20E-16 |
| Burn | 0.422 | 2 | 3.2774 | 0.039497 |
| Dune | 0.713 | 2 | 5.5297 | 0.004513 |
| Burn:Dune | 0.37 | 4 | 1.4367 | 0.222637 |
| Residuals | 14.822 | 230 |  |  |
| **Num\_Species** | | | | |
| (Intercept) | 3562.7 | 1 | 586.5605 | < 2.20E-16 |
| Burn | 38.6 | 2 | 3.1749 | 0.0436361 |
| Dune | 123.7 | 2 | 10.1796 | 5.81E-05 |
| Burn:Dune | 127.3 | 4 | 5.2402 | 0.0004672 |
| Residuals | 1397 | 230 |  |  |
| **Num\_Sp\_FrRoot** | | | | |
| (Intercept) | 375.76 | 1 | 3219.045 | < 2.00E-16 |
| Burn | 0.53 | 2 | 2.28 | 0.1046 |
| Dune | 0.95 | 2 | 4.0522 | 0.01864 |
| Burn:Dune | 1.03 | 4 | 2.2074 | 0.069 |
| Residuals | 26.85 | 230 |  |  |
| **Tot\_Abundance** | | | | |
| (Intercept) | 476910 | 1 | 57.0575 | 9.92E-13 |
| Burn | 15022 | 2 | 0.8986 | 0.40856 |
| Dune | 51711 | 2 | 3.0934 | 0.04724 |
| Burn:Dune | 86228 | 4 | 2.5791 | 0.03821 |
| Residuals | 1922435 | 230 |  |  |
| **Abun\_FrRoot** | | | | |
| (Intercept) | 927.63 | 1 | 1208.395 | < 2.20E-16 |
| Burn | 1.76 | 2 | 1.1431 | 0.320633 |
| Dune | 11.31 | 2 | 7.3672 | 0.0007921 |
| Burn:Dune | 9.05 | 4 | 2.947 | 0.021072 |
| Residuals | 176.56 | 230 |  |  |

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| Partial eta-squared effect size | | | | |
| **Parameter** | **Eta2 (partial)** | **90% CI** | **Eta2** | **90% CI** |
| **SWI**  eta\_squared(aov.SWI, partial=TRUE) | | | | |
| Burn | 4.32E-04 | [0.00, 0.00] | 3.92E-04 | [0.00, 0.00] |
| Dune | 0.05 | [0.01, 0.10] | 0.05 | [0.01, 0.10] |
| Burn:Dune | 0.05 | [0.00, 0.08] | 0.04 | [0.00, 0.08] |
| **SDI** | | | | |
| Burn | 0.03 | [0.00, 0.07] | 0.03 | [0.00, 0.06] |
| Dune | 0.05 | [0.01, 0.09] | 0.04 | [0.01, 0.09] |
| Burn:Dune | 0.02 | [0.00, 0.05] | 0.02 | [0.00, 0.09] |
| **Num\_Species** | | | | |
| Burn | 0.03 | [0.00, 0.07] | 0.02 | [0.00, 0.06] |
| Dune | 0.08 | [0.03, 0.14] | 0.07 | [0.02, 0.13] |
| Burn:Dune | 0.08 | [0.03, 0.13] | 0.08 | [0.02, 0.12] |
| **Num\_Sp\_FrRoot** | | | | |
| Burn | 0.02 | [0.00, 0.05] | 0.02 | [0.00, 0.05] |
| Dune | 0.03 | [0.00, 0.08] | 0.03 | [0.00, 0.07] |
| Burn:Dune | 0.04 | [0.00, 0.07] | 0.04 | [0.00, 0.07] |
| **Tot\_Abundance** | | | | |
| Burn | 7.75E-03 | [0.00, 0.03] | 7.24E-03 | [0.00, 0.03] |
| Dune | 0.03 | [0.00, 0.06] | 0.02 | [0.00, 0.06] |
| Burn:Dune | 0.04 | [0.00, 0.08 | 0.04 | [0.00, 0.08 |
| **Abun\_FrRoot** | | | | |
| Burn | 9.84E-03 | [0.00, 0.04] | 8.83E-03 | [0.00, 0.03] |
| Dune | 0.06 | [0.02, 0.11] | 0.06 | [0.01, 0.11] |
| Burn:Dune | 0.05 | [0.00, 0.09] | 0.05 | [0.00, 0.08] |

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| Games-Howell post-hoc test | | | | | | |
|  | **diff** | **ci.lo** | **ci.hi** | **t** | **df** | **p** |
| **SWI ~ Dune**  oneway(glm\_df$Dune, y = glm\_df$SWI, posthoc = 'games-howell') | | | | | | |
| Mid-Crest | 0.17 | -0.03 | 0.38 | 2 | 157 | 0.115 |
| Swale-Crest | 0.22 | 0.02 | 0.41 | 2.65 | 154.31 | 0.024 |
| Swale-Mid | 0.04 | -0.15 | 0.23 | 0.52 | 155.33 | 0.863 |
| **SDI ~ Burn** | | | | | | |
| BU-UB | 0.1 | -0.01 | 0.22 | 2.1 | 77.85 | 0.097 |
| UU-UB | 0.03 | -0.09 | 0.15 | 0.64 | 78.28 | 0.8 |
| UU-BU | -0.07 | -0.16 | 0.01 | 1.96 | 190.02 | 0.124 |
| **SDI ~ Dune** | | | | | | |
| Mid-Crest | 0.09 | -0.02 | 0.19 | 1.98 | 154.55 | 0.121 |
| Swale-Crest | 0.1 | 0.01 | 0.2 | 2.53 | 144.76 | 0.033 |
| Swale-Mid | 0.02 | -0.07 | 0.11 | 0.45 | 153.53 | 0.897 |
| **Num\_Sp\_FrRoot ~ Dune** | | | | | | |
| Mid-Crest | 0.09 | -0.04 | 0.22 | 1.61 | 153.88 | 0.245 |
| Swale-Crest | 0.11 | -0.02 | 0.23 | 2 | 156.84 | 0.115 |
| Swale-Mid | 0.02 | -0.12 | 0.15 | 0.27 | 156.07 | 0.96 |
| **Abun\_FrRoot ~ Dune** | | | | | | |
| Mid-Crest | 0.36 | 0.02 | 0.7 | 2.53 | 149.81 | 0.033 |
| Swale-Crest | 0.35 | 0.04 | 0.66 | 2.66 | 155.63 | 0.023 |
| Swale-Mid | -0.01 | -0.36 | 0.34 | 0.07 | 155.45 | 0.998 |