**Analysis of Variance for NOVIC Research Station Trials, 2010-2012**

**Squash Marketable Fruit Weight (kg)**

*7 genotypes in 9 environments*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source | | Df | | SS | | MS | | F | | P(>F) | |
| Total | | 168 | | 995.43 | | 105.80 | |  | |  | |
| Treatment Design | | 57 | | 871.51 | | 102.67 | | 113.98 | | < 0.0001 | |
| Genotype | | 6 | | 89.21 | | 14.87 | | 16.51 | | < 0.0001 | |
| Environment | | 8 | | 684.16 | | 85.52 | | 38.34 | | < 0.0001 | |
| GE Interaction | | 43 | | 98.14 | | 2.28 | | 2.53 | | 0.0001 | |
| Experimental Design | | 111 | | 123.92 | | 3.13 | |  | |  | |
| Blocks within Env. | | 18 | | 40.15 | | 2.23 | | 2.48 | | 0.0025 | |
| Error | | 93 | | 83.77 | | 0.90 | |  | |  | |

**Squash – Marketable Fruit Number**

*7 genotypes in 9 environments*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source | | Df | | SS | | MS | | F | | P(>F) | |
| Total | | 168 | | 466.95 | | 45.73 | |  | |  | |
| Treatment Design | | 57 | | 395.80 | | 43.98 | | 83.06 | | < 0.0001 | |
| Genotype | | 6 | | 61.18 | | 10.20 | | 19.26 | | < 0.0001 | |
| Environment | | 8 | | 255.56 | | 31.94 | | 26.24 | | < 0.0001 | |
| GE Interaction | | 43 | | 79.07 | | 1.84 | | 3.47 | | 0.0001 | |
| Experimental Design | | 111 | | 71.16 | | 1.75 | |  | |  | |
| Blocks within Env. | | 18 | | 21.91 | | 1.22 | | 2.30 | | 0.0052 | |
| Error | | 93 | | 49.25 | | 0.53 | |  | |  | |

**Broccoli – Average Head Size (cm)**

*7 genotypes in 9 environments*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source | | Df | | SS | | MS | | F | | P(>F) | |
| Total | | 170 | | 1749.66 | | 191.60 | |  | |  | |
| Treatment Design | | 57 | | 1597.05 | | 189.07 | | 136.03 | | < 0.0001 | |
| Genotype | | 6 | | 250.44 | | 41.74 | | 30.03 | | < 0.0001 | |
| Environment | | 8 | | 1140.22 | | 142.53 | | 124.75 | | < 0.0001 | |
| GE Interaction | | 43 | | 206.39 | | 4.80 | | 3.45 | | < 0.0001 | |
| Experimental Design | | 113 | | 152.61 | | 2.53 | |  | |  | |
| Blocks within Env. | | 18 | | 20.56 | | 1.14 | | 0.82 | | 0.6705 | |
| Error | | 95 | | 132.04 | | 1.39 | |  | |  | |

**Broccoli – Uniformity of Maturation (Percent Prime on Harvest Day)**

*7 genotypes in 9 environments*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source | | Df | | SS | | MS | | F | | P(>F) | |
| Total | | 164 | | 10.72 | | 0.78 | |  | |  | |
| Treatment Design | | 56 | | 6.57 | | 0.69 | | 19.31 | | < 0.0001 | |
| Genotype | | 6 | | 2.37 | | 0.40 | | 11.04 | | < 0.0001 | |
| Environment | | 8 | | 1.94 | | 0.24 | | 4.70 | | 0.0031 | |
| GE Interaction | | 42 | | 2.26 | | 0.05 | | 1.50 | | 0.0554 | |
| Experimental Design | | 108 | | 4.15 | | 0.09 | |  | |  | |
| Blocks within Env. | | 18 | | 0.93 | | 0.05 | | 1.44 | | 0.1321 | |
| Error | | 90 | | 3.22 | | 0.04 | |  | |  | |

**Carrot – Smoothness**

*6 genotypes in 6 environments*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source | | Df | | SS | | MS | | F | | P(>F) | |
| Total | | 214 | | 339.94 | | 22.24 | |  | |  | |
| Treatment Design | | 35 | | 156.05 | | 20.28 | | 19.61 | | < 0.0001 | |
| Genotype | | 5 | | 83.57 | | 16.71 | | 16.16 | | < 0.0001 | |
| Environment | | 5 | | 4.16 | | 0.83 | | 0.89 | | 0.5151 | |
| GE Interaction | | 25 | | 68.32 | | 2.73 | | 2.64 | | 0.0001 | |
| Experimental Design | | 179 | | 183.89 | | 1.97 | |  | |  | |
| Blocks within Env. | | 12 | | 11.18 | | 0.93 | | 0.90 | | 0.5478 | |
| Error | | 167 | | 172.71 | | 1.03 | |  | |  | |

**Carrot – Sweetness**

*6 genotypes in 6 environments*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source | | Df | | SS | | MS | | F | | P(>F) | |
| Total | | 208 | | 243.30 | | 11.44 | |  | |  | |
| Treatment Design | | 34 | | 65.38 | | 9.18 | | 9.21 | | < 0.0001 | |
| Genotype | | 5 | | 16.64 | | 3.33 | | 3.34 | | 0.0068 | |
| Environment | | 5 | | 24.11 | | 4.82 | | 3.81 | | 0.0168 | |
| GE Interaction | | 24 | | 24.63 | | 1.03 | | 1.03 | | 0.4317 | |
| Experimental Design | | 174 | | 177.92 | | 2.26 | |  | |  | |
| Blocks within Env. | | 17 | | 21.49 | | 1.26 | | 1.27 | | 0.2194 | |
| Error | | 157 | | 156.43 | | 1.00 | |  | |  | |