**S1 Table. Descriptive statistics and analysis of variance (ANOVA) of fruit agro-morphological and productivity traits within varietal groups (VGs)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **1A. Descriptive Stat** |  | **1B. ANOVA** |
| **VGs** | **Trait** (Unit) | **N** |  | **Min** | **Mean** | **Max** | **CV (%)** | **LSD0.05** |  | **Accession** | **Year** | **Accession\*Year (A\*Y) Interaction** |
| **Pungent** | **Plant Height** (cm) | 49 |  | 41.08 | 81.26 | 114.08 | 14.90 | 9.71 |  | 15.17\*\*\* | 13.22\*\*\* | 3.17\*\*\* |
|  | **Stem height** (cm) | 49 |  | 12.13 | 23.17 | 30.42 | 22.29 | 4.14 |  | 7.13\*\*\* | 180.97\*\*\* | 6.05\*\*\* |
|  | **Embranchment** | 49 |  | 2.25 | 2.72 | 4.54 | 17.93 | 0.39 |  | 8.86\*\*\* | 15.73\*\*\* | 6.90\*\*\* |
|  | **Fruit Length** (cm) | 49 |  | 1.37 | 10.18 | 22.75 | 13.92 | 1.14 |  | 210.63\*\*\* | 0.37 | 5.13\*\*\* |
|  | **Fruit Width** (cm) | 49 |  | 0.94 | 2.43 | 7.05 | 14.33 | 0.28 |  | 86.73\*\*\* | 149.77\*\*\* | 5.39\*\*\* |
|  | **Fruit Wall Thickness** (mm) | 49 |  | 1.03 | 2.39 | 5.78 | 20.05 | 0.38 |  | 23.67\*\*\* | 100.70\*\*\* | 3.26\*\*\* |
|  | **Locules** | 49 |  | 2.00 | 2.43 | 3.83 | 18.69 | 0.36 |  | 7.36\*\*\* | 12.77\*\*\* | 3.13\*\*\* |
|  | **Fruit Weight** (g) | 49 |  | 1.23 | 23.24 | 92.98 | 30.34 | 5.66 |  | 68.62\*\*\* | 42.40\*\*\* | 5.21\*\*\* |
|  | **Usable Part** (g) | 49 |  | 0.84 | 18.32 | 71.27 | 32.92 | 4.84 |  | 64.41\*\*\* | 26.12\*\*\* | 4.48\*\*\* |
|  | **Productivity** (kg/plant) | 49 |  | 0.22 | 0.51 | 1.26 | 29.10 | 0.17 |  | 10.43\*\*\* | 7.93\*\* | 3.33\*\*\* |
| **Sweet Green** | **Plant Height** (cm) | 48 |  | 57.75 | 75.12 | 96.33 | 11.87 | 7.15 |  | 12.02\*\*\* | 35.48\*\*\* | 5.87\*\*\* |
|  | **Stem height** (cm) | 48 |  | 14.17 | 22.75 | 31.50 | 21.24 | 3.88 |  | 8.96\*\*\* | 38.18\*\*\* | 3.58\*\*\* |
|  | **Embranchment** | 48 |  | 2.17 | 2.69 | 3.50 | 18.88 | 1.97 |  | 2.82\*\*\* | 0.01 | 1.77\*\* |
|  | **Fruit Length** (cm) | 48 |  | 6.38 | 11.14 | 22.67 | 28.80 | 2.57 |  | 21.43\*\*\* | 6.73\*\* | 1.62\*\* |
|  | **Fruit Width** (cm) | 48 |  | 1.63 | 4.55 | 7.08 | 12.29 | 0.45 |  | 88.11\*\*\* | 26.09\*\*\* | 5.47\*\*\* |
|  | **Fruit Wall Thickness** (mm) | 48 |  | 1.78 | 3.58 | 5.54 | 19.47 | 0.56 |  | 19.24\*\*\* | 40.12\*\*\* | 3.82\*\*\* |
|  | **Locules** | 48 |  | 2.08 | 2.77 | 3.58 | 19.18 | 0.43 |  | 8.06\*\*\* | 0.61 | 1.71\*\* |
|  | **Fruit Weight** (g) | 48 |  | 7.95 | 66.99 | 127.99 | 24.78 | 13.32 |  | 34.65\*\*\* | 0.72 | 3.68\*\*\* |
|  | **Usable Part** (g) | 48 |  | 5.09 | 56.97 | 113.40 | 26.99 | 12.33 |  | 32.61\*\*\* | 0.73 | 3.95\*\*\* |
|  | **Productivity** (kg/plant) | 48 |  | 0.31 | 0.61 | 0.95 | 32.38 | 0.23 |  | 2.37\*\*\* | 0.02 | 2.81\*\*\* |
| **Kapia** | **Plant Height** (cm) | 54 |  | 50.17 | 72.52 | 90.42 | 12.89 | 8.19 |  | 9.36\*\*\* | 9.72\*\* | 7.09\*\*\* |
|  | **Stem height** (cm) | 54 |  | 10.00 | 23.71 | 31.17 | 20.63 | 4.29 |  | 6.86\*\*\* | 17.56\*\*\* | 6.92\*\*\* |
|  | **Embranchment** | 54 |  | 2.25 | 2.62 | 3.00 | 17.52 | 0.40 |  | 2.45\*\*\* | 31.24\*\*\* | 1.72\*\* |
|  | **Fruit Length** (cm) | 54 |  | 4.70 | 12.36 | 16.27 | 11.25 | 1.22 |  | 12.92\*\*\* | 12.92\*\*\* | 5.21\*\*\* |
|  | **Fruit Width** (cm) | 54 |  | 1.48 | 4.98 | 8.50 | 22.56 | 0.51 |  | 12.20\*\*\* | 36.76\*\*\* | 6.86\*\*\* |
|  | **Fruit Wall Thickness** (mm) | 54 |  | 1.91 | 3.72 | 6.00 | 17.68 | 0.58 |  | 13.18\*\*\* | 1.45 | 3.45\*\*\* |
|  | **Locules** | 54 |  | 2.00 | 2.52 | 4.00 | 19.82 | 0.44 |  | 4.05\*\*\* | 29.78\*\*\* | 2.01\*\*\* |
|  | **Fruit Weight** (g) | 54 |  | 15.34 | 92.74 | 180.64 | 17.92 | 14.56 |  | 46.41\*\*\* | 7.77\*\* | 7.96\*\*\* |
|  | **Usable Part** (g) | 54 |  | 13.20 | 78.22 | 160.58 | 19.55 | 13.40 |  | 46.86\*\*\* | 24.05\*\*\* | 8.23\*\*\* |
|  | **Productivity** (kg/plant) | 54 |  | 0.24 | 0.58 | 1.05 | 35.67 | 0.23 |  | 3.67\*\*\* | 20.18\*\*\* | 2.22\*\*\* |
| **Pumpkin Shape** | **Plant Height** (cm) | 23 |  | 57.92 | 75.77 | 88.75 | 13.81 | 8.43 |  | 6.75\*\*\* | 2.38 | 1.73\* |
|  | **Stem height** (cm) | 23 |  | 16.33 | 21.78 | 27.50 | 18.34 | 3.81 |  | 5.16\*\*\* | 9.10\*\* | 3.96\*\*\* |
|  | **Embranchment** | 23 |  | 2.25 | 2.64 | 3.25 | 21.70 | 0.39 |  | 3.36\*\*\* | 6.32\*\*\* | 1.75\* |
|  | **Fruit Length** (cm) | 23 |  | 2.05 | 3.92 | 5.26 | 18.13 | 0.57 |  | 12.82\*\*\* | 94.80\*\*\* | 3.43\*\*\* |
|  | **Fruit Width** (cm) | 23 |  | 4.09 | 7.00 | 8.65 | 11.15 | 0.63 |  | 24.36\*\*\* | 152.12\*\*\* | 5.01\*\*\* |
|  | **Fruit Wall Thickness** (mm) | 23 |  | 4.05 | 5.44 | 6.66 | 15.86 | 0.70 |  | 4.35\*\*\* | 0.74 | 4.18\*\*\* |
|  | **Locules** | 23 |  | 2.67 | 3.07 | 3.58 | 17.41 | 0.43 |  | 2.41\*\*\* | 1.31 | 2.47\*\*\* |
|  | **Fruit Weight** (g) | 23 |  | 35.88 | 111.61 | 151.82 | 22.57 | 20.31 |  | 16.67\*\*\* | 24.11\*\*\* | 2.59\*\*\* |
|  | **Usable Part** (g) | 23 |  | 28.38 | 95.99 | 131.57 | 23.94 | 18.52 |  | 16.65\*\*\* | 39.06\*\*\* | 2.91\*\*\* |
|  | **Productivity** (kg/plant) | 23 |  | 0.25 | 0.51 | 0.74 | 37.64 | 0.23 |  | 2.27\*\* | 2.07 | 1.53 |
| **Paprika** | **Plant Height** (cm) | 6 |  | 32.50 | 64.44 | 91.58 | 11.12 | 5.86 |  | 118.16\*\*\* | 31.29\*\*\* | 8.33\*\*\* |
|  | **Stem height** (cm) | 6 |  | 18.08 | 25.57 | 29.50 | 14.40 | 3.01 |  | 18.49\*\*\* | 10.04\*\* | 10.44\*\*\* |
|  | **Embranchment** | 6 |  | 1.17 | 2.40 | 3.08 | 23.20 | 0.46 |  | 22.13\*\*\* | 5.41\* | 4.98\*\*\* |
|  | **Fruit Length** (cm) | 6 |  | 6.73 | 9.06 | 12.61 | 12.38 | 0.92 |  | 39.60\*\*\* | 0.18 | 4.47\*\* |
|  | **Fruit Width** (cm) | 6 |  | 2.08 | 2.66 | 3.29 | 12.26 | 0.27 |  | 29.26\*\*\* | 14.39\*\*\* | 7.64\*\*\* |
|  | **Fruit Wall Thickness** (mm) | 6 |  | 1.03 | 1.37 | 1.80 | 30.29 | 0.34 |  | 7.51\*\*\* | 18.98\*\*\* | 1.86\*\*\* |
|  | **Locules** | 6 |  | 2.33 | 2.92 | 3.92 | 18.97 | 0.45 |  | 12.31\*\*\* | 14.70\*\*\* | 3.81\*\* |
|  | **Fruit Weight** (g) | 6 |  | 9.78 | 16.29 | 23.58 | 20.77 | 2.77 |  | 36.00\*\*\* | 17.03\*\*\* | 5.75\*\*\* |
|  | **Usable Part** (g) | 6 |  | 7.45 | 13.55 | 19.89 | 22.13 | 2.46 |  | 36.46\*\*\* | 29.94\*\*\* | 8.52\*\*\* |
|  | **Productivity** (kg/plant) | 6 |  | 0.11 | 0.18 | 0.24 | 33.13 | 0.07 |  | 5.11\*\* | 6.51\* | 0.94 |

Where, SD: Standard Deviation; CV: Coefficient of Variation; LSD: Least Significant Differences. \* \*\* \*\*\* showed differences at 0.05, 0.01 and 0.001 significance level, respectively.