Table S4. Cluster wise accession comparison (Duncan Test) for brix or TSS (%), Vit C (mg/100g FW), Antioxidant Activity (µmol Fe2+/g FW), and Total Polyphenols (mg GAE/100g FW).

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Accession** |  | **TSS** | |  | **Vit C** | |  | **AA** | |  | **TP** | |
|  |  | **Mean ± SD** | **RSD %** |  | **Mean ±SD** | **RSD %** |  | **Mean ± SD** | **RSD %** |  | **Mean ± SD** | **RSD %** |
| **Cluster 1:** |  |  |  |  |  |  |  |  |  |  |  |  |
| LYC-1 |  | 4.5e±0.3 | 6.3 |  | 24.2bcd±2.3 | 9.5 |  | 3.9bc±0.2 | 4.2 |  | 39.5b±1.8 | 4.7 |
| LYC-2 |  | 4.6de±0.1 | 1.5 |  | 24.1bcd±2.5 | 10.3 |  | 2.8ghi±0.2 | 6.7 |  | 30.0def±0.6 | 2.1 |
| LYC-3 |  | 5.2bc±0.4 | 8.2 |  | 22.9bcd±1.9 | 8.3 |  | 3.5c-f±0.4 | 11.8 |  | 34.4c±3.2 | 9.3 |
| LYC-4 |  | 5.0cd±0.1 | 1.4 |  | 21.6cde±3.4 | 15.6 |  | 2.5i±0.3 | 10.4 |  | 23.9g±2.7 | 11.1 |
| LYC-5 |  | 4.4e±0.2 | 4.8 |  | 23.5bcd±1.2 | 5.0 |  | 3.3efg±0.1 | 1.7 |  | 32.4cde±1.2 | 3.7 |
| LYC-6 |  | 5.5b±0.3 | 5.1 |  | 28.6b±0.3 | 1.1 |  | 4.6a±0.2 | 3.6 |  | 44.7a±1.9 | 4.2 |
| LYC-7 |  | 4.5e±0.3 | 6.3 |  | 39.4a±4.1 | 10.4 |  | 2.7hi±0.2 | 7.6 |  | 27.2fg±0.3 | 1.0 |
| LYC-8 |  | 4.6de±0.1 | 1.5 |  | 27.4bc±2.4 | 8.6 |  | 3.9bc±0.1 | 2.9 |  | 40.0b±1.4 | 3.6 |
| LYC-9 |  | 4.7cde±0.1 | 3.0 |  | 19.6de±1.9 | 9.9 |  | 4.2ab±0.3 | 7.1 |  | 40.7b±1.6 | 4.0 |
| LYC-10 |  | 4.6de±0.1 | 1.5 |  | 20.4de±0.6 | 3.2 |  | 3.1fgh±0.1 | 3.4 |  | 29.9def±1.2 | 3.9 |
| LYC-17 |  | 6.3a±0.3 | 4.5 |  | 18.8de±2.1 | 11.4 |  | 3.4def±0.3 | 9.9 |  | 33.4cd±2.0 | 6.0 |
| LYC-20 |  | 4.9cde±0.1 | 2.9 |  | 16.3e±4.2 | 25.6 |  | 3.1fgh±0.1 | 3.0 |  | 29.2ef±1.0 | 3.3 |
| LYC-21 |  | 5.2bc±0.3 | 5.4 |  | 22.9bcd±2.0 | 8.6 |  | 3.6cde±0.2 | 4.3 |  | 35.0c±1.6 | 4.5 |
| **Average** |  | **4.9±0.5** | **10.8** |  | **23.8±5.8** | **24.2** |  | **3.4±0.6** | **17.8** |  | **33.9±6.0** | **17.7** |
| **Cluster 2:** |  |  |  |  |  |  |  |  |  |  |  |  |
| LYC-13 |  | 4.9±0.1 | 2.9 |  | 19.5±1.2 | 6.2 |  | 3.5±0.2 | 5.5 |  | 34.7±6.7 | 19.2 |
| LYC-15 |  | 5.2±0.3 | 5.4 |  | 18.9±3.8 | 20.2 |  | 4.1±0.6 | 14.6 |  | 38.1±8.0 | 20.9 |
| **Average** |  | **5.1±0.25** | **4.2** |  | **19.2±0.4** | **1.2** |  | **3.8±0.4** | **10.7** |  | **36.4±2.4** | **6.6** |
| **Cluster 3:** |  |  |  |  |  |  |  |  |  |  |  |  |
| LYC-34 |  | 6.2a±0.3 | 4.6 |  | 24.2ns±2.8 | 11.6 |  | 3.9ns±0.4 | 10.3 |  | 47.0ns±2.5 | 5.2 |
| LYC-35 |  | 5.5b±0.1 | 2.6 |  | 26.2ns±2.7 | 10.1 |  | 4.0ns±0.2 | 4.1 |  | 43.6ns±4.8 | 11.0 |
| LYC-42 |  | 5.9ab±0.1 | 2.4 |  | 28.8ns±1.8 | 6.1 |  | 4.2ns±0.1 | 3.5 |  | 48.5ns±4.0 | 8.3 |
| **Average** |  | **5.9±0.4** | **5.9** |  | **26.4±2.3** | **8.8** |  | **4.1±0.2** | **4.0** |  | **46.4±2.5** | **5.4** |
| **Cluster 4:** |  |  |  |  |  |  |  |  |  |  |  |  |
| LYC-14 |  | 4.5fg±0.1 | 1.6 |  | 20.5c-g±2.6 | 12.8 |  | 3.2cd±0.4 | 13.6 |  | 30.7def±3.3 | 10.9 |
| LYC-18 |  | 6.4a±0.1 | 1.2 |  | 34.7a±1.6 | 4.6 |  | 5.5a±0.1 | 2.7 |  | 53.0a±4.2 | 7.8 |
| LYC-36 |  | 5.7b±0.3 | 5.0 |  | 25.4bc±0.6 | 2.4 |  | 3.4cd±0.2 | 6.6 |  | 36.8b-f±1.7 | 3.8 |
| LYC-37 |  | 5.5b±0.2 | 3.9 |  | 24.2bcd±0.4 | 1.6 |  | 2.8d±0.3 | 10.7 |  | 29.0ef±0.7 | 2.5 |
| LYC-38 |  | 5.4bc±0.3 | 5.2 |  | 26.9b±2.8 | 10.6 |  | 3.8bc±0.2 | 5.7 |  | 40.5bcd±1.3 | 3.2 |
| LYC-39 |  | 4.9def±0.1 | 2.9 |  | 23.4b-e±3.2 | 13.6 |  | 3.7cd±0.1 | 3.8 |  | 38.8b-e±2.3 | 7.5 |
| LYC-40 |  | 4.5fg±0.0 | 0.0 |  | 17.9fg±2.4 | 13.3 |  | 3.2cd±0.3 | 8.4 |  | 31.6def±2.0 | 6.3 |
| LYC-41 |  | 5.0cde±0.2 | 4.0 |  | 19.2d-g±0.9 | 4.8 |  | 3.1cd±0.2 | 5.9 |  | 29.5ef±1.1 | 3.6 |
| LYC-43 |  | 4.8ef±0.1 | 2.9 |  | 21.4c-g±1.7 | 6.5 |  | 3.8bc±0.2 | 4.8 |  | 40.7bcd±3.4 | 8.4 |
| LYC-44 |  | 5.4bc±0.1 | 2.6 |  | 22.9b-f±3.7 | 16.0 |  | 3.7cd±0.4 | 11.1 |  | 35.4c-f±15.9 | 45.0 |
| LYC-45 |  | 4.8ef±0.1 | 2.9 |  | 25.3bc±0.7 | 2.7 |  | 4.7ab±1.0 | 20.8 |  | 47.2ab±2.7 | 5.6 |
| LYC-46 |  | 5.7b±0.1 | 2.5 |  | 17.9fg±2.0 | 10.9 |  | 3.6cd±0.4 | 10.0 |  | 38.7b-e±2.0 | 5.3 |
| LYC-47 |  | 5.5b±0.3 | 5.1 |  | 18.6efg±1.3 | 6.8 |  | 3.6cd±0.1 | 2.7 |  | 32.3c-f±3.0 | 9.4 |
| LYC-48 |  | 4.8ef±0.3 | 5.9 |  | 19.5d-f±0.2 | 0.8 |  | 3.7cd±0.1 | 3.4 |  | 27.8f±1.9 | 6.7 |
| LYC-49 |  | 4.1g±0.1 | 3.4 |  | 16.5g±3.3 | 19.8 |  | 3.2cd±0.6 | 17.6 |  | 37.5b-f±2.3 | 6.1 |
| LYC-50 |  | 4.8ef±0.1 | 2.9 |  | 17.6fg±0.7 | 4.0 |  | 3.0cd±0.8 | 27.8 |  | 29.5ef±1.4 | 4.7 |
| LYC-51 |  | 4.5fg±0.1 | 3.1 |  | 18.4efg±2.8 | 15.1 |  | 3.2cd±0.3 | 9.0 |  | 29.2ef±0.3 | 1.2 |
| LYC-52 |  | 5.3±0.3 | 5.3 |  | 23.5b-e±3.7 | 15.9 |  | 3.5cd±0.3 | 9.6 |  | 42.2bc±1.6 | 3.9 |
| **Average** |  | **5.1±0.6** | **11.1** |  | **21.9±4.5** | **20.4** |  | **3.6±0.6** | **17.5** |  | **36.1±7.0** | **19.3** |
| **Cluster 5:** |  |  |  |  |  |  |  |  |  |  |  |  |
| LYC-26 |  | 8.4±0.3 | 3.4 |  | 9.5±3.1 | 32.6 |  | 9.6±1.0 | 10.6 |  | 88.3±11.1 | 12.5 |
| LYC-33 |  | 7.4±0.3 | 3.8 |  | 12.2±3.0 | 24.7 |  | 8.1±0.7 | 9.1 |  | 75.8±2.0 | 2.7 |
| **Average** |  | **7.9±0.7** | **9.0** |  | **10.8±1.9** | **20.2** |  | **8.9±1.1** | **12.0** |  | **82.2±8.8** | **10.7** |
| **Cluster 6:** |  |  |  |  |  |  |  |  |  |  |  |  |
| LYC-11 |  | 7.3cd±0.3 | 3.9 |  | 33.8bc±3.2 | 9.3 |  | 6.8c±0.4 | 5.4 |  | 68.2c±2.2 | 3.3 |
| LYC-12 |  | 7.5bc±0.1 | 1.9 |  | 32.1c±1.3 | 4.0 |  | 4.9e±0.8 | 15.9 |  | 52.4c±2.8 | 5.3 |
| LYC-16 |  | 5.4e±0.1 | 2.6 |  | 35.0bc±6.3 | 18.1 |  | 5.5de±0.2 | 4.3 |  | 57.2c±6.7 | 11.8 |
| LYC-19 |  | 4.7f±0.1 | 3.0 |  | 45.8a±2.0 | 4.4 |  | 6.2cd±0.7 | 10.9 |  | 56.2c±3.4 | 6.1 |
| LYC-23 |  | 7.7bc±0.1 | 0.9 |  | 32.6c±2.5 | 7.6 |  | 5.3de±0.3 | 6.4 |  | 53.4c±4.7 | 8.8 |
| LYC-24 |  | 7.8ab±0.1 | 0.9 |  | 43.8a±3.8 | 8.8 |  | 7.3c±0.4 | 5.7 |  | 68.4c±1.3 | 2.2 |
| LYC-27 |  | 8.3a±0.1 | 1.7 |  | 41.5ab±2.5 | 6.1 |  | 11.8a±0.5 | 4.4 |  | 124.2a±14.1 | 11.4 |
| LYC-31 |  | 7.1d ±0.1 | 1.0 |  | 46.4a±1.5 | 3.2 |  | 9.6b±0.2 | 2.4 |  | 105.2b±7.1 | 6.8 |
| **Average** |  | **7.0±1.3** | **18.0** |  | **38.9±6.1** | **15.7** |  | **7.2±2.4** | **33.2** |  | **73.2±26.9** | **36.7** |
| **Cluster 7:** |  |  |  |  |  |  |  |  |  |  |  |  |
| LYC-22 |  | 7.4±0.3 | 3.8 |  | 32.3±3.7 | 11.6 |  | 6.0±0.5 | 8.0 |  | 62.1±2.8 | 4.4 |
| **Cluster 8:** |  |  |  |  |  |  |  |  |  |  |  |  |
| LYC-25 |  | 6.7b±0.3 | 4.2 |  | 33.6ab±0.6 | 1.7 |  | 6.6ns±1.6 | 28.7 |  | 59.0d±1.8 | 3.1 |
| LYC-28 |  | 8.1a±0.1 | 0.9 |  | 37.6a±2.2 | 6.0 |  | 6.2ns±0.2 | 3.1 |  | 67.8c±3.9 | 5.7 |
| LYC-29 |  | 8.2a±0.1 | 0.9 |  | 36.3a±1.4 | 3.7 |  | 8.1ns±0.3 | 4.1 |  | 97.8a±3.6 | 3.7 |
| LYC-30 |  | 8.2a±0.1 | 0.9 |  | 20.7c±1.2 | 5.6 |  | 7.3ns±0.4 | 5.4 |  | 89.4b±1.8 | 2.0 |
| LYC-32 |  | 6.0c±0.4 | 5.9 |  | 32.0b±2.2 | 6.7 |  | 6.0ns±0.3 | 5.5 |  | 68.4c±4.1 | 6.0 |
| **Average** |  | **7.4±1.0** | **13.8** |  | **32.0±6.7** | **21.0** |  | **6.7±1.0** | **15.0** |  | **76.5±16.4** | **21.4** |

a,b,c…….P ≤ 0.05, Duncan’s Multiple Range Test.