

Figure S1: Site map of the prospected areas of Jammu and Kashmir, India from where apricot accessions were collected.

Table S1: List of 28 traits used for the analysis of phenotypic diversity of 68 apricot accessions.

|  |  |
| --- | --- |
| Trait | Unit |
| Quantitative traits |  |
| Leaf: area | (cm)² |
| Leaf blade: length  | (cm)  |
| Leaf blade: width | (cm) |
| Leaf blade: ratio length/width | Code |
| Petiole: length | (cm) |
| Ratio: Leaf length/Petiole length | Code |
| Fruit size: weight  | (g) |
| Fruit: length  | (mm) |
| Fruit: width  | (mm) |
| Fruit: ratio weight of pulp/weight of stone | Code |
| Stone: weight  | (g) |
| Kernel: weight  | (g) |
| Qualitative traits | **Available modalities** |
| Tree: habit | 1: Upright, 2: Spreading, 3: Drooping |
| Leaf blade: shape of base | 1: Obtuse, 2: Truncate, 3: Cordate |
| Leaf blade: angle of apex (excluding tip) | 1: Right-angled, 2: Moderately obtuse, 3: Strongly obtuse |
| Leaf blade: incisions of margin | 1: Crenate, 2: Serrate, 3: Biserrate |
| Petiole: glands number | 1: <2, 2: 2-4, 3: >4 |
| Petiole: anthocyanin coloration of upper side | 1: Weak, 2: Medium, 3: Strong |
| Fruit: harvest maturity | 1: Early, 2: Mid, 3: Late |
| Fruit: shape | 1: Round, 2: Elliptic, 3: Ovate, 4:Oblong |
| Fruit :suture | 1: Shallow, 2: Intermediate, 3: Deep. |
| Fruit: shape of apex | 1: Flat, 2: Rounded, 3: Pointed |
| Fruit: ground color of skin | 1:Greenish yellow, 2: Yellow, 3: Light orange, 4: Orange, 5: Red blush |
| Fruit: firmness of flesh | 1: Soft, 2: Medium, 3: Hard |
| Stone: shape | 1:Round, 2: Ovate, 3:Elliptic, 4:Elongated |
| Stone: separation of stone | 1: Semi-clinging, 2: Free. |
| Stone: color  | 1:Brown, 2: Creamy |
| Kernel: kernel taste | 1: Sweet, 2: Bitter. |

Table S2: Results of the analysis of variance (ANOVA) for quantitative traits: Fisher test values and probability level at a threshold of 0.05%.

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| --- | --- | --- | --- | --- |
| **Variable source** | **Sum of Squares** | **Mean Square** | **Fisher** | **P>F** |
| LAr | 61469.006 | 917.448 | 230.073a | <0.0001 |
| LLe | 992.808 | 14.818 | 55.822a | <0.0001 |
| LWd | 729.982 | 10.895 | 63.944a | <0.0001 |
| RLW | 6.321 | 0.094 | 12.322a | <0.0001 |
| PLe | 341.502 | 5.097 | 65.420a | <0.0001 |
| RLP | 2.550 | 0.038 | 22.740a | <0.0001 |
| FWt | 87453.018 | 1305.269 | 299.903a | <0.0001 |
| FLe | 29419.291 | 439.094 | 239.530a | <0.0001 |
| FWd | 30771.903 | 459.282 | 231.216a | <0.0001 |
| RPS | 8175.302 | 122.019 | 54.175a | <0.0001 |
| SWt | 260.164 | 3.883 | 117.950a | <0.0001 |
| KWt | 15.206 | 0.227 | 90.710a | <0.0001 |

 a Highly significant at a threshold of α = 1%.

 Refer to the table 2 for the code of traits

Table S3: Pearson’s correlation matrix between different traits in apricot accessions.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | THa | LLe | LWd | RLW | LAr | LSb | LAa | LIm | PLe | PGn | PAc | RLP | FHm |
| THa | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| LLe | 0.20 | 1 |  |  |  |  |  |  |  |  |  |  |  |
| LWd | 0.15 | 0.90\*\* | 1 |  |  |  |  |  |  |  |  |  |  |
| RLW | 0.14 | 0.08 | -0.35\*\* | 1 |  |  |  |  |  |  |  |  |  |
| LAr | 0.18 | 0.89\*\* | 0.91\*\* | -0.17 | 1 |  |  |  |  |  |  |  |  |
| LSb | -0.10 | -0.39\*\* | -0.30\* | -0.17 | -0.25\* | 1 |  |  |  |  |  |  |  |
| LAa | -0.07 | -0.18 | 0.06 | -0.53\*\* | -0.13 | 0.07 | 1 |  |  |  |  |  |  |
| LIm | -0.11 | -0.26\* | -0.21 | -0.08 | -0.28\* | 0.11 | 0.22 | 1 |  |  |  |  |  |
| PLe | 0.08 | 0.79\*\* | 0.80\*\* | -0.12 | 0.78\*\* | -0.25\* | 0.04 | -0.27\* | 1 |  |  |  |  |
| PGn | -0.16 | 0.16 | 0.09 | 0.09 | 0.12 | -0.24 | -0.09 | -0.06 | 0.22 | 1 |  |  |  |
| PAc | 0.14 | 0.12 | 0.13 | -0.04 | 0.10 | -0.08 | 0.06 | -0.23 | 0.10 | 0.04 | 1 |  |  |
| RLP | 0.13 | -0.33\*\* | -0.43\*\* | 0.30\* | -0.39\*\* | 0.00 | -0.2 | 0.19 | -0.81\*\* | -0.21 | -0.08 | 1 |  |
| FHm | 0.06 | 0.39\*\* | 0.34\*\* | 0.03 | 0.34\*\* | -0.22 | -0.16 | -0.04 | 0.17 | 0.18 | 0.27\* | -0.01 | 1 |
| FWt | 0.06 | 0.49\*\* | 0.54\*\* | -0.17 | 0.48\*\* | -0.13 | 0.10 | -0.11 | 0.61\*\* | 0.08 | -0.11 | -0.43\*\* | -0.03 |
| FLe | 0.03 | 0.56\*\* | 0.59\*\* | -0.2 | 0.56\*\* | -0.13 | 0.06 | -0.14 | 0.63\*\* | 0.08 | -0.09 | -0.42\*\* | 0.06 |
| FWd | 0.02 | 0.54\*\* | 0.60\*\* | -0.21 | 0.55\*\* | -0.10 | 0.10 | -0.08 | 0.61\*\* | 0.02 | -0.07 | -0.41\*\* | 0.00 |
| FSh | 0.15 | -0.04 | -0.06 | 0.04 | -0.03 | 0.11 | 0.18 | 0.01 | 0.01 | -0.08 | -0.20 | -0.03 | -0.05 |
| RPS | 0.01 | 0.35\*\* | 0.41\*\* | -0.17 | 0.35\*\* | -0.09 | 0.13 | -0.08 | 0.48\*\* | 0.01 | -0.08 | -0.34\*\* | -0.15 |
| FSu | 0.02 | 0.15 | 0.18 | -0.11 | 0.12 | -0.17 | 0.16 | -0.17 | 0.25\* | 0.20 | 0.01 | -0.20 | 0.03 |
| FSa | 0.13 | -0.03 | -0.06 | 0.05 | 0.03 | 0.20 | -0.13 | -0.26\* | -0.01 | 0.04 | 0.15 | -0.06 | 0.09 |
| FGs | 0.21 | -0.06 | 0.04 | -0.23 | 0.00 | 0.09 | 0.21 | -0.03 | -0.01 | -0.17 | 0.10 | -0.04 | 0.03 |
| FFf | -0.10 | 0.18 | 0.25\* | -0.19 | 0.21 | 0.04 | 0.19 | 0.15 | 0.29\* | -0.02 | 0.08 | -0.30\* | .27\* |
| SWt | 0.13 | 0.60\*\* | 0.60\*\* | -0.10 | 0.58\*\* | -0.15 | 0.02 | -0.10 | 0.63\*\* | 0.08 | -0.08 | -0.38\*\* | 0.13 |
| SSh | 0.02 | -0.16 | -0.13 | -0.09 | -0.11 | -0.02 | 0.05 | -0.01 | -0.01 | 0.12 | -0.02 | -0.12 | -0.03 |
| SSt | -0.05 | -0.02 | 0.11 | -0.27\* | 0.12 | 0.05 | 0.12 | 0.05 | -0.01 | -0.30\* | 0.30\* | 0.00 | -0.14 |
| KWt | 0.06 | 0.44\*\* | 0.54\*\* | -0.29\* | 0.42\*\* | -0.05 | 0.19 | -0.03 | 0.51\*\* | -0.01 | -0.16 | -0.37\*\* | -0.11 |
| KTa | 0.09 | -0.22 | -0.33\*\* | 0.27\* | -0.27\* | -0.09 | -0.26\* | 0.08 | -0.47\*\* | 0.08 | 0.17 | 0.47\*\* | 0.16 |

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|  | FWt | FLe | FWd | FSh | RPS | FSu | FSa | FGs | FFf | SWt | SSh | SSt | KWt | KTa |
| THa |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LLe |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LWd |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RLW |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LAr |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LSb |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LAa |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LIm |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PLe |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PGn |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PAc |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RLP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FHm |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FWt | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FLe | 0.96\*\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| FWd | 0.97\*\* | 0.97\*\* | 1 |  |  |  |  |  |  |  |  |  |  |  |
| FSh | 0.02 | 0.06 | -0.04 | 1 |  |  |  |  |  |  |  |  |  |  |
| RPS | 0.92\*\* | 0.86\*\* | 0.90\*\* | -0.08 | 1 |  |  |  |  |  |  |  |  |  |
| FSu | 0.31\*\* | 0.27\* | 0.23 | 0.19 | 0.21 | 1 |  |  |  |  |  |  |  |  |
| FSa | -0.29\* | -0.19 | -0.29\* | 0.17 | -0.30\* | 0.05 | 1 |  |  |  |  |  |  |  |
| FGs | 0.03 | 0.04 | 0.08 | 0.01 | 0.07 | 0.11 | 0.14 | 1 |  |  |  |  |  |  |
| FFf | 0.07 | 0.11 | 0.08 | 0.07 | -0.02 | 0.31\*\* | 0.09 | 0.12 | 1 |  |  |  |  |  |
| SWt | 0.88\*\* | 0.91\*\* | 0.89\*\* | 0.10 | 0.66\*\* | 0.30\* | -0.23 | 0.00 | 0.14 | 1 |  |  |  |  |
| SSh | -0.10 | -0.04 | -0.15 | 0.12 | -0.1 | 0.03 | 0.30\* | -0.07 | -0.01 | -0.09 | 1 |  |  |  |
| SSt | -0.02 | 0.02 | 0.06 | -0.16 | 0.01 | -0.17 | 0.00 | 0.02 | 0.07 | 0.01 | -0.08 | 1 |  |  |
| KWt | 0.80\*\* | 0.79\*\* | 0.82\*\* | 0.02 | 0.76\*\* | 0.19 | -0.23 | 0.04 | 0.08 | 0.72\*\* | -0.15 | -0.08 | 1 |  |
| KTa | -0.75\*\* | -0.75\*\* | -0.72\*\* | -0.12 | -0.74\*\* | -0.30\* | 0.19 | -0.05 | -0.261\* | -0.63\*\* | -0.05 | -0.04 | -0.71\*\* | 1 |

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed)

 Refer to the table 2 for the code of traits