**Table S1. Map location of sites for collection of Kala zeera accessions**

|  |  |  |  |
| --- | --- | --- | --- |
| **Area** | **Longitude** | **Latitude** | **Altitude (m)** |
| **Gurez** | 34.6494°N | 74.7366°E | 2,580 |
| **Tulail** | 34.5559°N | 75.0544°E | 2,750 |
| **Kishtiwar** | 33.3116°N | 75.7662°E | 1,638 |
| **Keran** | 34.6651°N | 73.961°E | 1,524 |
| **Machil** | 34.6923°N | 74.3592°E | 2,450 |
| **Tangdhar** | 34.3975°N | 73.8607°E | 1,929 |
| **Kargil** | 34.5539°N | 76.1349°E | 2,676 |
| **Paddar** | 33.2658°N | 76.1581°E | 2,958 |
| **Khrew** | 34.0209°N | 74.9998°E | 1,607 |
| **Char-e-sharief** | 33.8629°N | 74.7663°E | 1,933 |
| **Drass** | 34.4306°N | 75.7515°E | 3,300 |
| **Kinnaur** | 31.6510°N | 78.4752°E | 4,075 |
| **Lahaul Spiti** | 32.6192°N | 77.3784°E | 4,883 |
| **Pang** | 30.0409°N | 78.8652°E | 4,600 |
| **Bharmour** | 32.4411°N | 76.5357°E | 2,121 |
| **Shong/ Shaung** | 31.1100°N | 77.1600°E | 2,662 |

**Table S2. Range, mean, standard deviation and coefficient of variation (CV) for characters under study**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Min** | **Max** | **Mean** | **Std. Dev** | **CV** |
| Days to flower initiation | 26 | 42 | 29.16 | 2.35 | 8.05 |
| Days to 50% flowering | 36 | 48 | 39.77 | 2.62 | 6.58 |
| Days to full bloom | 48 | 59 | 54.72 | 2.52 | 4.60 |
| Plant height | 12 | 67 | 35.54 | 9.66 | 27.18 |
| Number of branches plant-1 | 1 | 6 | 2.82 | 1.25 | 44.32 |
| Number of umbelets umbel-1 | 7 | 15 | 11 | 1.61 | 14.63 |
| Umbel diameter | 8.1 | 11.9 | 10.3 | 1.05 | 10.19 |
| Days to 80% maturity | 83 | 94 | 89.66 | 2.69 | 3.00 |
| Number of seeds plant-1 | 17 | 347 | 110.85 | 55.25 | 49.84 |
| 1000 seed weight | 1.56 | 2.12 | 1.9 | 0.11 | 5.78 |
| Seed yield plant-1 | 0.4 | 6.4 | 1.64 | 0.96 | 58.53 |

**Table S3. Principal component analysis (PCA) of the traits under study**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **PC1** | **PC2** | **PC3** | **PC4** |
| Days to flower initiation | 0.455 | -0.072 | -0.079 | 0.031 |
| Days to 50% flowering | 0.518 | -0.101 | -0.049 | 0.056 |
| Days to full bloom | 0.501 | -0.102 | -0.024 | 0.066 |
| Plant height | 0.025 | -0.021 | 0.586 | 0.584 |
| Number of branches plant-1 | 0.084 | 0.492 | -0.08 | -0.028 |
| Number of Umbels per plant | 0.147 | 0.503 | 0.034 | 0.013 |
| Number of umbelets umbel-1 | 0.015 | 0.144 | 0.658 | -0.193 |
| Umbel diameter | 0.061 | 0.178 | 0.297 | -0.604 |
| Days to 80% maturity | 0.481 | -0.064 | 0.053 | -0.109 |
| Number of seeds plant-1 | 0.094 | 0.530 | -0.046 | 0.057 |
| 1000 seed weight | -0.027 | 0.139 | -0.294 | -0.175 |
| Seed yield plant-1 | -0.018 | 0.349 | -0.166 | 0.449 |