**Supplementary Table S1.** The information of chili and bellpepper accessions for evaluating agronomical traits under night low temperature in winter 2020-2021.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Fruit type** | **Field name** | **Given number** | **Species** | **Original name** |
| Chili pepper | 20LT01 | C01 | *Capsicum annuum L.* | Kobra |
| 20LT02 | C02 | *Capsicum annuum L.* | Bekesi tf. |
| 20LT03 | C03 | *Capsicum annuum L.* | 16HT9 |
| 20LT04 | C04 | *Capsicum annuum L.* | 16HT7 |
| 20LT05 | C05 | *Capsicum annuum L.* | Local ladozhskiy |
| 20LT07 | C06 | *Capsicum annuum L.* | 16HT1 |
| 20LT08 | C07 | *Capsicum annuum L.* | AVPP1248 |
| 20LT09 | C08 | *Capsicum annuum L.* | AVPP1249 |
| 20LT10 | C09 | *Capsicum annuum L.* | Yeongyang haneulcho |
| 20LT11 | C10 | *Capsicum annuum L.* | Jeonbuksunchang-1985-gochu102827 |
| 20LT12 | C11 | *Capsicum annuum L.* | Jeonbukimsil-1985-gochu105233 |
| 20LT13 | C12 | *Capsicum annuum L.* | Monori tf. |
| 20LT14 | C13 | *Capsicum annuum L.* | BGH 1806 |
| 20LT16 | C14 | *Capsicum annuum L.* | Ardei Lung Plovdiv |
| 20LT19 | C15 | *Capsicum annuum L.* | Mie-Midori |
| 20LT27 | C16 | *Capsicum annuum L.* | Bandung Jaelaejong |
| 20LT28 | C17 | *Capsicum annuum L.* | NIKAR |
| 20LT29 | C18 | *Capsicum annuum L.* | 256 |
| 20LT30 | C19 | *Capsicum annuum L.* | N2 |
| 20LT31 | C20 | *Capsicum annuum L.* | N32 |
| 20LT32 | C21 | *Capsicum annuum L.* | Kukon |
| 20LT36 | C22 | *Capsicum annuum L.* | NW Bigarim |
| 20LT37 | C23 | *Capsicum annuum L.* | Bigstar |
| 20LT38 | C24 | *Capsicum annuum L.* | Noggwang |
| 20LT39 | C25 | *Capsicum annuum L.* | Cheongyang |
| 20LT40 | C26 | *Capsicum annuum L.* | Kalcho |
| 20LT41 | C27 | *Capsicum annuum L.* | Samcheok Jaelae |
| Bell pepper  (Paprika) | 20LT06 | P01 | *Capsicum annuum L.* | Vanity |
| 20LT15 | P02 | *Capsicum annuum L.* | Sredneaziatskiy sladkiy |
| 20LT17 | P03 | *Capsicum annuum L.* | Beliy krugliy |
| 20LT20 | P04 | *Capsicum annuum L.* | Sweet chocolate |
| 20LT21 | P05 | *Capsicum annuum L.* | Urias Dulce |
| 20LT23 | P06 | *Capsicum annuum L.* | Dar Tashkenta |
| 20LT24 | P07 | *Capsicum annuum L.* | Krupnoplodniy udlinennokonicheskiy |
| 20LT25 | P08 | *Capsicum annuum L.* | Desi |
| 20LT33 | P09 | *Capsicum annuum L.* | Bogatyr |
| 20LT34 | P10 | *Capsicum annuum L.* | Macho |
| 20LT35 | P11 | *Capsicum annuum L.* | Gourmet F1 |
| 20LT42 | P12 | *Capsicum annuum L.* | Zheltiy |

**Supplementary Table S2.** Loading matrix associated with the principal components analysis (PCA) for 10 agronomical traits.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Value | **PC1** | **PC2** | **PC3** | **PC4** | **PC5** | **PC6** | **PC7** | **PC8** | **PC9** | **PC10** |
| Eigenvalue | 4.663 | 1.913 | 1.136 | 0.897 | 0.602 | 0.378 | 0.188 | 0.106 | 0.086 | 0.030 |
| Variability (%) | 46.635 | 19.134 | 11.363 | 8.970 | 6.017 | 3.777 | 1.876 | 1.065 | 0.859 | 0.305 |
| Cumulative (%) | 46.635 | 65.769 | 77.132 | 86.102 | 92.118 | 95.895 | 97.771 | 98.836 | 99.695 | 100.000 |
| Component loading |  |  |  |  |  |  |  |  |  |  |
| FL | 0.885 | 0.196 | 0.205 | 0.196 | 0.058 | 0.161 | 0.048 | 0.253 | 0.021 | -0.051 |
| FD | 0.878 | 0.327 | 0.034 | 0.253 | 0.040 | 0.063 | 0.052 | -0.212 | 0.022 | -0.053 |
| FW | 0.791 | 0.573 | -0.009 | 0.105 | 0.042 | -0.019 | 0.010 | -0.052 | -0.031 | 0.171 |
| FY | 0.318 | 0.914 | 0.001 | 0.068 | 0.178 | -0.075 | 0.013 | 0.005 | -0.147 | -0.014 |
| NFR | 0.386 | 0.815 | 0.238 | 0.220 | 0.084 | -0.014 | 0.045 | 0.008 | 0.270 | -0.013 |
| PH | 0.062 | 0.078 | 0.964 | -0.001 | 0.158 | 0.184 | -0.040 | 0.010 | 0.013 | -0.003 |
| SD | 0.154 | 0.087 | 0.737 | 0.232 | -0.100 | 0.171 | 0.577 | 0.002 | 0.006 | 0.000 |
| NFL | 0.297 | 0.164 | 0.080 | 0.929 | 0.007 | 0.103 | 0.067 | 0.002 | 0.009 | 0.001 |
| LMA | 0.059 | 0.162 | 0.096 | 0.006 | 0.967 | 0.157 | -0.026 | 0.001 | 0.002 | 0.000 |
| NSF | 0.108 | -0.075 | 0.241 | 0.099 | 0.170 | 0.940 | 0.048 | 0.005 | 0.002 | -0.002 |