**Supplementary tables**

Table S1. List of dandelion accessions included in the study

|  |  |  |  |
| --- | --- | --- | --- |
| Accession name | Country of origin | Biological status of population | Donor institutions or GPS of collection site in wild, height above sea level |
| Gluda | Latvia, Jelgavas novads, Glūdas pagasts | wild | N 56°37'35.774", E 23°29'38.133", 94 m |
| Rubuli | Latvia, Rubuļi, Saldus novads, Zaņas pagasts, | wild | N 56°28'38.58", E 22°14'43.80", 73 m |
| Kuldiga | Latvia, Kuldīgas novads, Pelču pagasts | wild | 56°56'17.7"N 22°01'37.1"E, 22 m |
| Mundigciems | Latvia, Mundigciems, Lībagu pagasts, Talsu novads | wild | N 57˚13' 8.95", E 22˚35'5.2079, 90 m |
| Radzinciems | Latvia, Radziņciems, Tukuma novads, Smārdes pagasts, | wild | 56°59'06.2"N 23°15'36.6"E, 27 m |
| Marupe | Latvia, Vētras, Mārupes novads, Mārupes pagasts | wild | 56°51'15.4"N 24°00'10.4"E, 9 m |
| Tuja | Latvia, Tūja, Limbažu novads, Liepupes pagasts | wild | N 57°30'11.3", E 24°22'55.7", 6 m |
| Turaida | Latvia, Turaida, Siguldas novads, Krimuldas pagasts | wild | N 57°11'37.1", E 24°50'30.5", 96 m |
| Renceni | Latvia, Rencēni, Cēsu novads, Amatas pagasts | wild | N 57°11'34.2", E 25°19'20.3", 174 m |
| Priekuli | Latvia, Lidlauks, Cēsu novads, Priekuļu pagasts | wild | N 57°19'18.1", E 25°18'52.7", 113 m |
| Zoseni | Latvia, Spolgas, Cēsu novads, Zosēnu pagasts | wild | N 57°09'59.6", E 25°47'48.3", 186 m |
| Gaizinkalns | Latvia, Gaiziņkalns, Madonas novads, Vestienas pagasts | wild | N 56°52'50.7", E 25°56'33.3", 238 m |
| Vecumnieki | Latvia, Bauskas novads, Vecumnieku pagasts | wild | N 56°36'48.75", E24°30'48.12", 28 m |
| TA008 | Germany | unknown | commercial source |
| Novelle | Germany | unknown | commercial source |

Table S2. Gradient elution timetable used for the LC-UV method

|  |  |  |
| --- | --- | --- |
| Time  (min) | Mobile phase A  (% v/v) | Mobile phase B  (% v/v) |
| 0 | 90 | 10 |
| 0-13 | 90-78 | 10-22 |
| 13-14 | 78-60 | 22-40 |
| 14-18 | 60 | 40 |
| 18-20 | 60-90 | 40-10 |

Table S3. Characterisation of variation for dandelion populations included in the study

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameters | Range | | Mean | SD | CV% |
| Min | Max |
| Plant leaf area, cm2 | 758 | 1329 | 1098.3 | 172.7 | 15.7 |
| Flower area, cm2 | 65.9 | 270 | 181.4 | 62.5 | 34.5 |
| Flower proportion, % | 8.6 | 20.1 | 15.6 | 3.5 | 22.2 |
| Weight of fresh root, g | 165 | 399 | 297.8 | 66.9 | 22.5 |
| Weight of dry root, g | 47 | 117 | 86.9 | 20.9 | 23.5 |
| Yield of fresh roots, kg ha-1 | 5505 | 13297 | 9925.8 | 2226.7 | 22.4 |
| Yield of dry roots, kg ha-1 | 1558 | 3896 | 2894.5 | 689.8 | 23.3 |
| CHA, % | 0.028 | 0.123 | 0.064 | 0.039 | 34.6 |
| CCA, % | 0.049 | 0.153 | 0.104 | 0.026 | 25.1 |

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Description automatically generated

**Fig. S1.** Correlations among observed traits (RDW – root dry weight, FA -flower area, LA-leaf area, FP -flower proportion) of common dandelion using Person correlation coefficients is displayed as heat map. Only significant (p < 0.05) correlations are presented.