Table 1. List of potato accessions genotyped, including Latvian potato genetic resources collection, breeding material and foreign cultivars.

|  |  |  |  |
| --- | --- | --- | --- |
| Accession | Origin | Year of release | Country of origin |
| Bred at SPPBI | | | |
| Agra | 1649.9 / 522.183 | 1931-1940 | LV |
| Astra | 10710.1 / P8-615 | 1977 | LV |
| Eksports | Primadonna / Pepo | 1931-1940 | LV |
| Gauja | Lawa / 10792.2 | 1977 | LV |
| Izstāde | V5018-2 / Agra | 1960 | LV |
| Jubileja | Aquila / Fruhnudel | 1973 | LV |
| Laima | Irish Cobbler / Jubel | 1931-1940 | LV |
| Lauma | Selection from Fanal | 1987 | LV |
| Mandaga | Picasso / Zarevo | 2010 | LV |
| Māris | 12352.10 / Gauja | 1992 | LV |
| Priekuļu Baltie | Kameraz18-368 / Agra | 1967 | LV |
| Skaidra | Frila / Kristal | 1988 | LV |
| Spars | M.40663/21 / Erika |  | LV |
| Vidzeme | 48-397 / (Jelgavas Miltainie /Mittelfruhe Grenxmark) | 1968 | LV |
| Vidzemes Vēlie | Spirtnieks / Sickingen | 1931-1940 | LV |
| Vita | 5018-2 / Kameraz | 1968 | LV |
| Zeltīte | Erstling / Eksports | 1951 | LV |
| Carnikava | Kungla / Oktjabrjonok | 1957 | LV |
| Jaunvāle | Vegetative hybrid from Vāle |  | LV |
| Stendes Baltie | Vāle / Hindenburg | 1956 | LV |
| Vāle | Štrekent.plantlet D2814 / Zwickauer Fruhe |  | LV |
| Bred by private breeder A.Saulītis | | | |
| Agrie Baltie | Unknown | 2004 | LV |
| Brūklenīte | Irradiation mutant from Mutamet |  | LV |
| Dadzītis | Irradiation mutant |  | LV |
| Daugava | Unknown | 2005 | LV |
| KPAX-1 | Unknown |  | LV |
| Mutagenagrie | Selection from Axilia irradiated seeds | 1993 | LV |
| Leta | Anco / Axilia irradiated seeds/ |  | LV |
| Spīdola | Unknown |  | LV |
| SPO-11 | Unknown |  | LV |
| Vēlais Mutants | Irradiation mutant from Karpatskij |  | LV |
| Local cultivar | | | |
| Jelgavas Baltie | Local cultivar |  | LV |
| Breeding clones | | | |
| 12137.1 | Delos / 10789.2 |  | LV |
| 13108.2 | 12103.1 / Anco |  | LV |
| 15695.66 | Omega / Turysta |  | LV |
| 15702.66 | Omega / Agra |  | LV |
| 16538.18 | (15813seegling / Nevskij) / 15328.6 |  | LV |
| 16842.28 | Certa / (Ogonok / Zorka) |  | LV |
| 16955.1 | 15615.31 /(Ogonok / Zorka) |  | LV |
| 17174.12 | Lux /(Meta / Provita) |  | LV |
| 17252.72 | Filli / Axilia |  | LV |
| 17301.6 | Aula / 3128.35 |  | LV |
| 17325.107 | (Meta / Maris Piper) / Orlonok |  | LV |
| 17325.83 | (Meta / Maris Piper) / Orlonok |  | LV |
| 17630.18 | 1614-06 / (Meta / Provita) |  | LV |
| 17666.86 | Aula / Sarme |  | LV |
| 79-329.8 | Meta / Jasen |  | LV |
| 82-157.139 | Gauja / Sož |  | LV |
| 95-36.100 | Picasso / Zarevo |  | LV |
| 95-36.114 | Picasso / Zarevo |  | LV |
| 95-36.133 | Picasso / Zarevo |  | LV |
| A 99332-4 | Inca Gold / Granola |  | USA / LV |
| A 99438-1 | Torindon / A 88431 |  | USA / LV |
| S 00028-13 | Zhukovskiy ranniy N / Dina N |  | LV |
| S 00048-37 | Pamir N / Quarta N |  | LV |
| S 00052-9 | Alpinist N / Quarta N |  | LV |
| S 01022-3 | Kuras N / Van Gogh N |  | LV |
| S 01033-10 | Raja N / Ariadna N |  | LV |
| S 01063-5 | Folva N / Latona N |  | LV |
| S 01069-2 | Quarta N / Monta N |  | LV |
| S 01075-4 | Verba / Dina N |  | LV |
| S 01075-5 | Verba / Dina N |  | LV |
| S 01085-1 | Pepo N / Vineta N |  | LV |
| S 01085-21 | Pepo N / Vineta N |  | LV |
| S 01085-30 | Pepo N / Vineta N |  | LV |
| S 01085-35 | Pepo N / Vineta N |  | LV |
| S 01085-54 | Pepo N / Vineta N |  | LV |
| S 99017-58 | Barbara N / Quarta N |  | LV |
| S 99108-8 | Barbara N / Quarta N |  | LV |
| S 99115-2 | Kardal / Zarevo |  | LV |
| S 99143-3 | Sante N / Verba |  | LV |
| Foreign cultivars | | | |
| Alpinist | 4900-9 / 222-14 |  | BY |
| Dina | Adretta / 1.65.801/133 |  | BY |
| Verba | Erdkraft / 2497-7 |  | BY |
| Zhivitsa | Ponto / Vihol |  | BY |
| Barbara | MPI64-956-68 / AM62-740 |  | DE |
| Granola | Zuhstamm3333/60 / 267-04 |  | DE |
| Pamir | Berolina / Granola |  | DE |
| Pepo | Ilse / 1884/78 |  | DE |
| Planta | 1054/71 / Nausica |  | DE |
| Quarta | Aurelia-1 / Clivia |  | DE |
| Rosara | Secura / 2605/77 |  | DE |
| Vineta | 2.1347-75N / Solina |  | DE |
| Folva | Miranda / Maris Piper |  | DK |
| Kardal | Astart / (SVP)AM66-42 |  | NL |
| Kuras | Brda / VK69-491 |  | NL |
| Latona | Jaerla /Nicola |  | NL |
| Raja | Elvira / CB70-162-23 |  | NL |
| Sante | Y66-13-636 / AM66-49 |  | NL |
| Van Gogh | ZPS69C239 / Gloria-2 |  | NL |
| Ariadna | S18-7 / Sagitta |  | RU |
| Zhukovskij Rannij | Jagodka / Hydra |  | RU |
| Borodjanskij Rozovij | 77.583 / Hydra |  | UA |
| Zarevo | 7692c/68 /Bekra |  | UA |

Table S2. Homology-based annotation of DArT clones polymorphic between varieties ‘Laima’ and ‘Priekulu Baltie’.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DArT clone | Sequence (bp) | Genotype ‘Laima’/ ‘Priekulu Baltie’ | BLASTN | | | BLASTX | | |
| GenBank accession, annotation | Score | E-value | GenBank accession, annotation | Score | E-value |
| 457218 | 386 | 0/1 | XM\_004235271.2, *Solanum lycopersicum* cytochrome P450 89A2-like (LOC101259134), mRNA | 448 | 8e-122 | XP\_004235319, *Solanum lycopersicum* cytochrome P450 89A2-like | 175 | 5e-56 |
| 473147 | 427 | 0/1 | XM\_006367502.1, *S. tuberosum* putative disease resistance protein RGA3-like (LOC102585712), mRNA | 555 | 4e-154 | XP\_006367564*, S. tuberosum* putative disease resistance protein RGA3-like | 259 | 7e-77 |
| 438651 | 697 | 0/1 | HG975523, *S. lycopersicum* chromosome ch11, complete genome | 1260 | 0.0 | XP\_006353267*, S. tuberosum* CMP-sialic acid transporter 4-like | 42 | 0.25 |
| 656922 | 658 | 0/1 | HG975447, *S. pennellii* chromosome ch08, complete genome | 1033 | 0.0 | XP\_006359751, *S. tuberosum* probable transcriptional regulatory protein At2g25830-like isoform X2 | 65.5 | 3e-09 |
| 651798 | 515 | 1/0 | HM561824, *S. tuberosum* isolate 703606.3 granule-bound starch synthase (GBSSI) gene, GBSSI-3 allele | 946 | 0.0 | NP\_001274918, *S. tuberosum* granule-bound starch synthase 1, chloroplastic/amyloplastic | 80.1 | 2e-34 |
| 652236 | 278 | 1/0 | HG975524, *S. lycopersicum* chromosome ch12, complete genome | 193 | 4e*-45* | XP\_009602431, *Nicotiana tomentosiformis* uncharacterized protein LOC104097554 | 57.4 | 4e-10 |
| 536004 | 815 | 1/0 | HQ896311, *S. tuberosum* clone RH198H18, complete sequence | 1421 | 0.0 | XP\_004228785, *S. lycopersicum* uncharacterized protein LOC101255821 | 205 | 1e-89 |
| 559360 | 553 | 1/0 | XM\_006340477, *S. tuberosum* pentatricopeptide repeat-containing protein At4g14850-like (LOC102578590), mRNA | 843 | 0.0 | XP\_006340539, *S. tuberosum* pentatricopeptide repeat-containing protein At4g14850-like | 286 | 4e-89 |
| 537141 | 438 | 1/0 | No significant similarity found | - | - | XP\_010325249, *S. lycopersicum* uncharacterized protein LOC104648902 | 138 | 2e-35 |