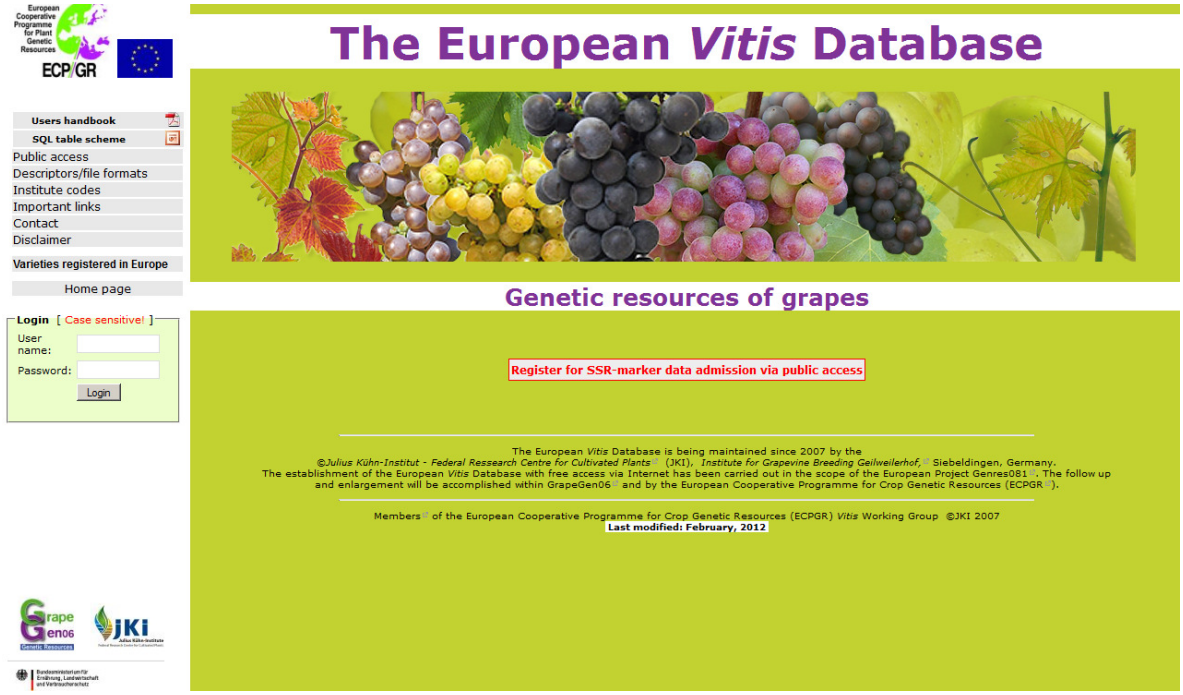
# European *Vitis* Database – Handbook

## Contents

# 1 Introduction

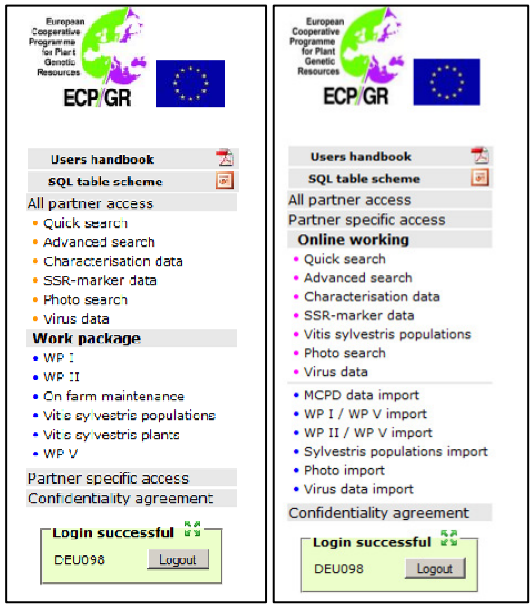
The European *Vitis* Database encompasses 3 access levels: **public access**, **all partner access** and **partner specific access**.

Via **Public access** the user has direct access to the data of grapevine accessions existing in European grapevine collections.
Via **Login** (username and password) partners of the European *Vitis* Database enter the partner access level which is subdivided in **all partner access** and **partner specific access**. This is the working area for the partners of GrapeGen06 respectively Cost action FA1003. Here the upload and download options are located.
From the **partner specific access** level data can be imported by holding collections themselves. Import programs have been created for data uploading of MCPDs, SSR-markers, characterization, virus, *Vitis sylvestris* populations and photos.




**All partner access**:
Particularity: access to the data recorded in GrapeGen06 work packages I to V

**Partner specific access**:
Particularities: import modules for MCPD data, characterization and SSR-marker data, photos and virus data.



## 1.1 General remarks

The quality of long term germplasm preservation and management depends on several factors like maintenance in collections, sanitary conditions and selection of valuable and unique genotypes. A prerequisite for the latter is trueness to type. Hence in the European *Vitis* Database high priority has been attributed to the accurate documentation of criteria related to trueness to type. Two documents explaining respective features are to be found at "Descriptors/file formats" (see chapter 2.9), section "A: Multi Crop Passport Descriptors adopted for *Vitis* specific purposes". All partners of the European *Vitis* Database are encouraged to adhere to the therein established requirements.

In the European *Vitis* Database on all generated tables links to further specifications exist. If you pass over the table with your mouse and the writing appears blue, via mouse click you attain further information.

# 2 Description of search tools on the public access level

**2.1** *Quick search* offers a rapid search for 6 MCPD's: species, subtaxa, subtaxa authority, accession name, country of origin of the variety and holding institution.

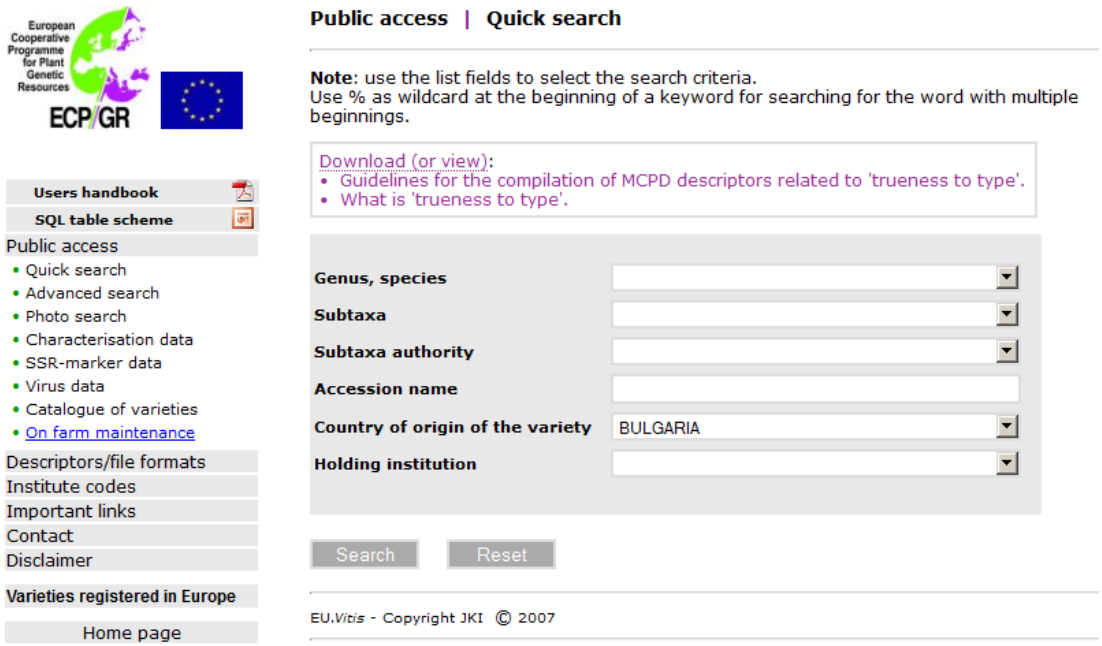
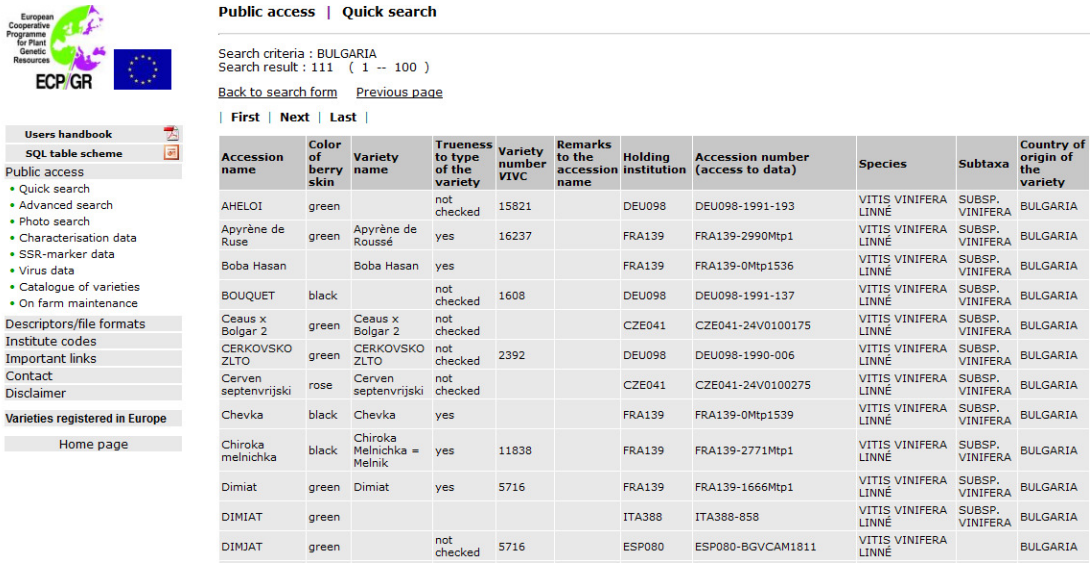



Figure 1: Search result for accessions with country of origin of the variety = Bulgaria




| Accession name | Color of berry skin | Variety name | Trueness to type of the variety | Variety number VIVC | Remarks to the accession name | Holding institution | Accession number (access to data) | Species | Subtaxa | Country of origin of the variety |
|---|---|---|---|---|---|---|---|---|---|---|
| AHELOI | green | | not checked | 15821 | | DEU098 | DEU098-1991-193 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| Apyrène de Ruse | green | Apyrène de Roussé | yes | 16237 | | FRA139 | FRA139-2990Mtp1 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| Boba Hasan | | Boba Hasan | yes | | | FRA139 | FRA139-0Mtp1536 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| BOUQUET | black | | not checked | 1608 | | DEU098 | DEU098-1991-137 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| Ceaus x Bolgar 2 | green | Ceaus x Bolgar 2 | not checked | | | CZE041 | CZE041-24V0100175 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| CERKOVSKO ZLTO | green | CERKOVSKO ZLTO | not checked | 2392 | | DEU098 | DEU098-1990-006 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| Cerven septenvrijski | rose | Cerven septenvrijski | not checked | | | CZE041 | CZE041-24V0100275 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| Chevka | black | Chevka | yes | | | FRA139 | FRA139-0Mtp1539 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| Chiroka melnichka | black | Chiroka Melnichka = Melnik | yes | 11838 | | FRA139 | FRA139-2771Mtp1 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| Dimiat | green | Dimiat | yes | 5716 | | FRA139 | FRA139-1666Mtp1 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| DIMIAT | green | | | | | ITA388 | ITA388-858 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | BULGARIA |
| DIMJAT | green | | not checked | 5716 | | ESP080 | ESP080-BGVCAM1811 | VITIS VINIFERA LINNÉ | | BULGARIA |

Figure 2: Search for accessions with an accession name starting with “Alfrocheiro”

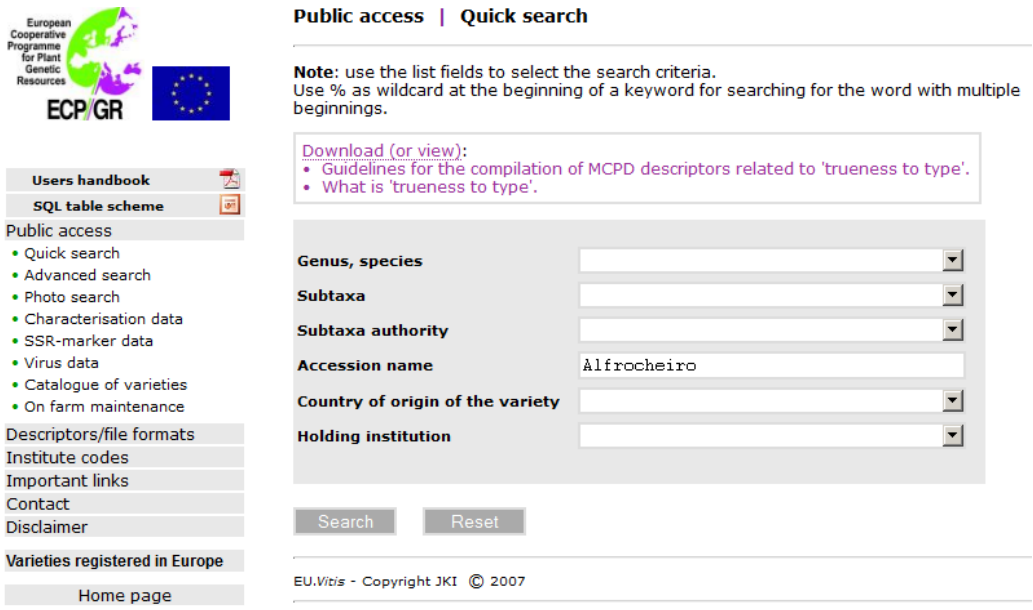



Figure 3: Search result for accession names beginning with Alfrocheiro”

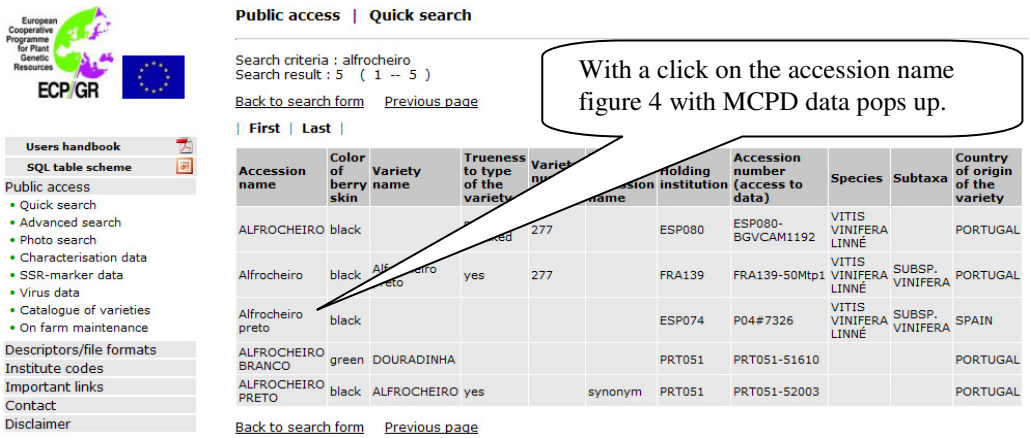



Figure 4: MCPD data of the accession “Alfrocheiro preto”

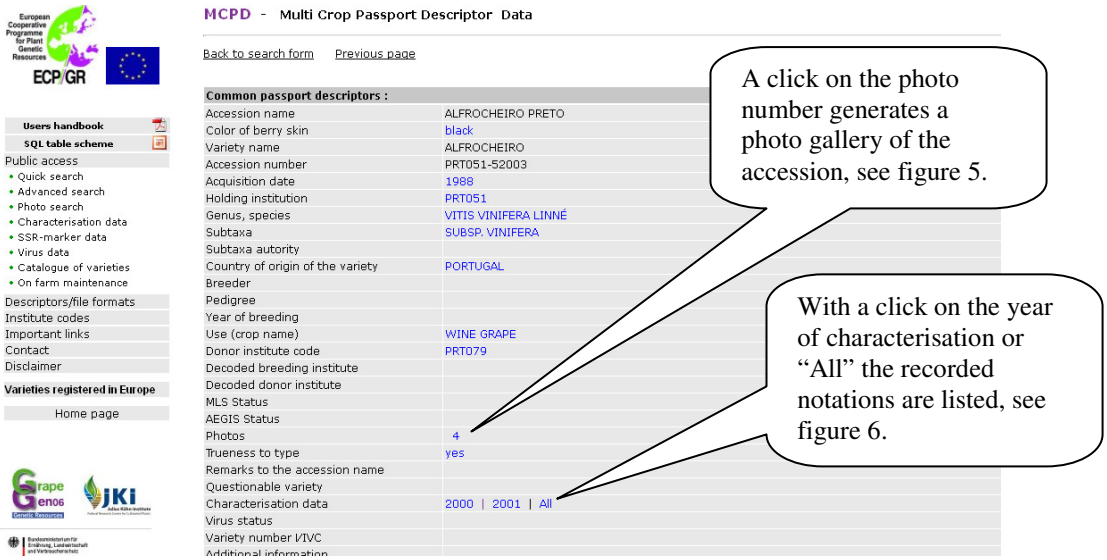
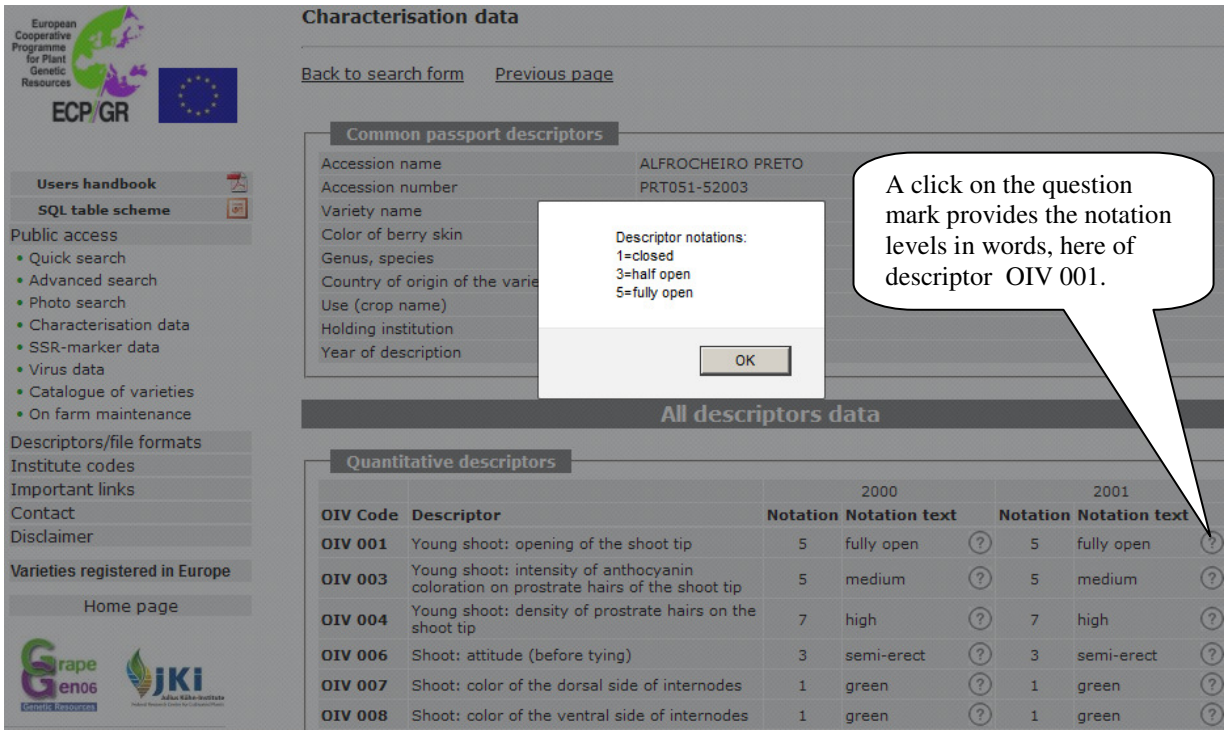


Figure 5: Photo gallery of the accession “Alfrocheiro preto”


Figure 6: Characterisation data of the accession “Alfrocheiro preto”



**2.2** *Advanced search* encompasses two data types:
**A: Passport descriptors** and **B: Characterisation descriptors.**

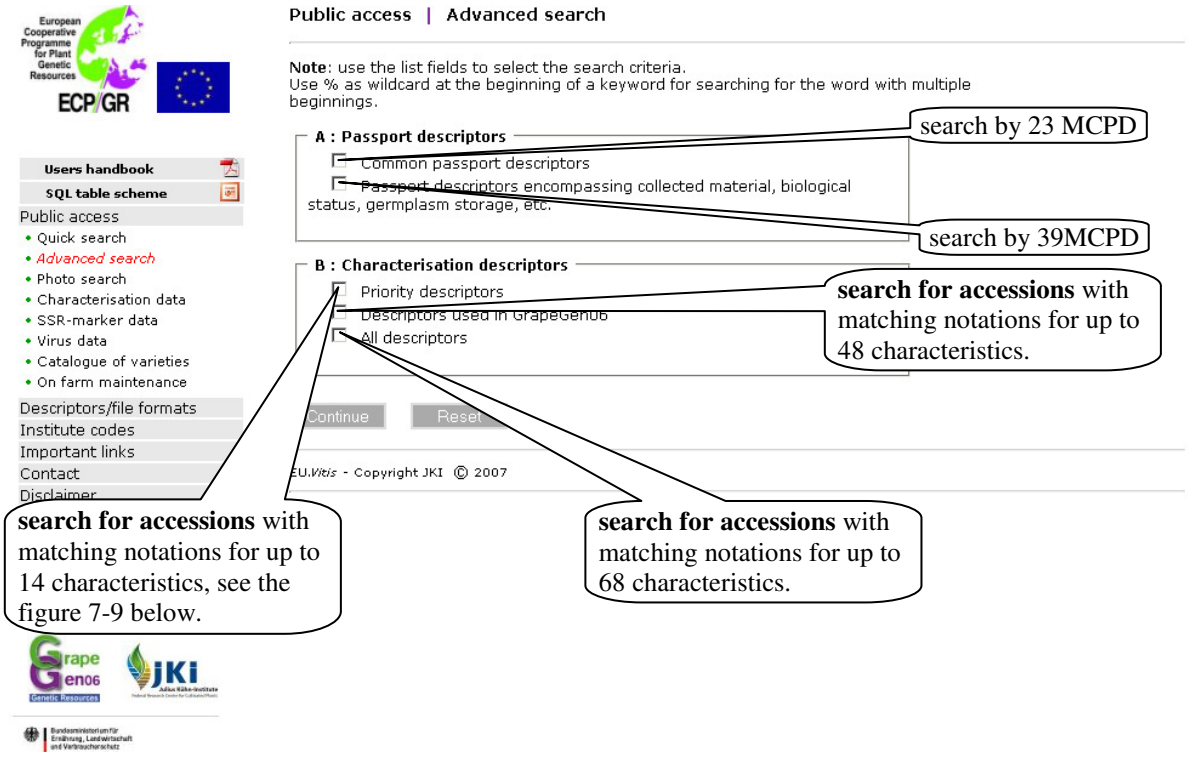



Figure 7: Search for accessions with specific characteristics, e.g. OIV 001 = 5.

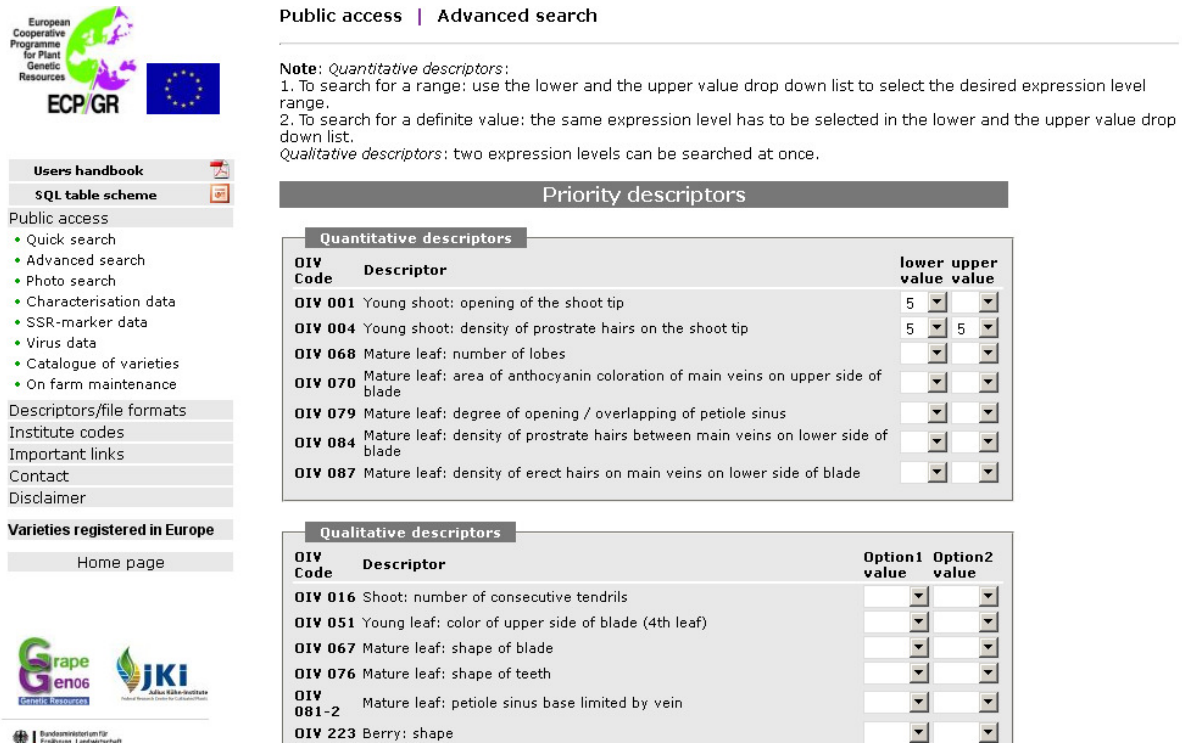
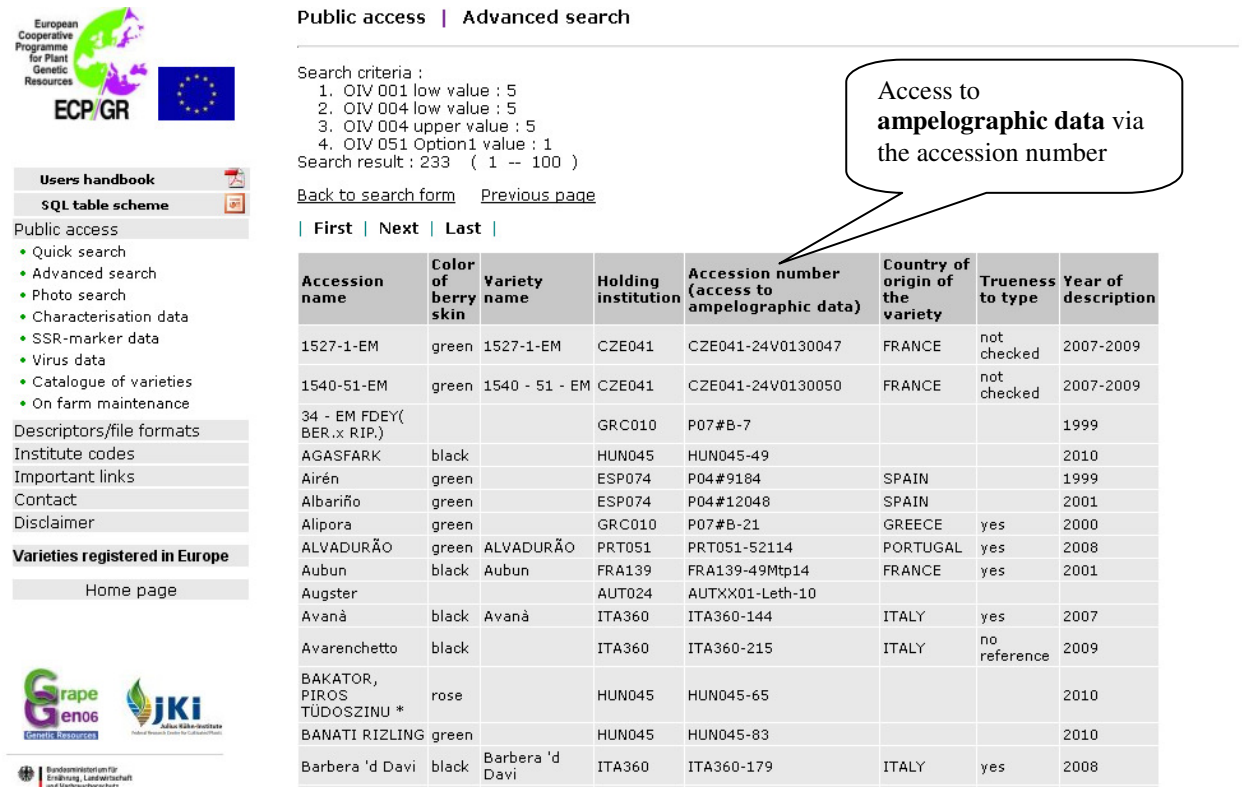
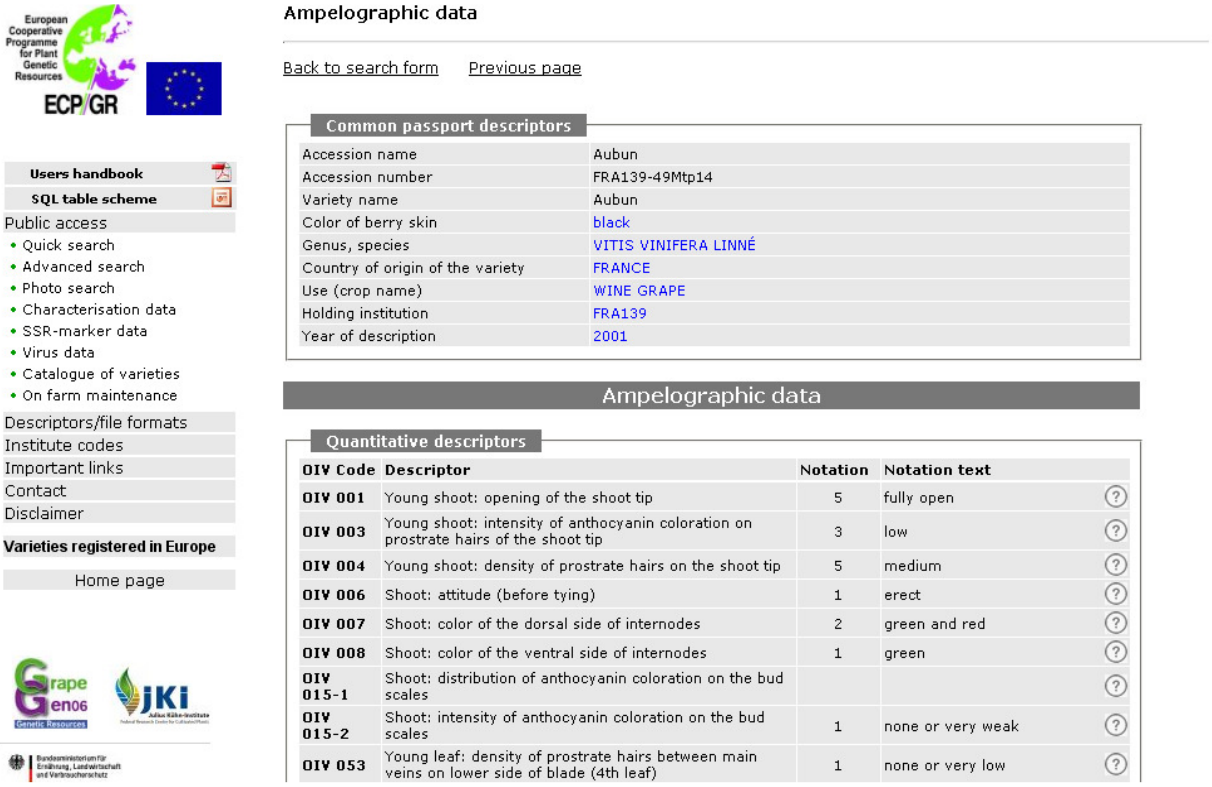


Figure 8: 233 accessions are matching the entered notation values.




| Accession name | Color of berry skin | Variety name | Holding institution | Accession number (access to ampelographic data) | Country of origin of the variety | Trueness to type | Year of description |
|---|---|---|---|---|---|---|---|
| 1527-1-EM | green | 1527-1-EM | CZE041 | CZE041-24V0130047 | FRANCE | not checked | 2007-2009 |
| 1540-51-EM | green | 1540 - 51 - EM | CZE041 | CZE041-24V0130050 | FRANCE | not checked | 2007-2009 |
| 34 - EM FDEY( BER.x RIP.) | | | GRC010 | P07#B-7 | | | 1999 |
| AGASFARK | black | | HUN045 | HUN045-49 | | | 2010 |
| Airén | green | | ESP074 | P04#9184 | SPAIN | | 1999 |
| Albariño | green | | ESP074 | P04#12048 | SPAIN | | 2001 |
| Alipora | green | | GRC010 | P07#B-21 | GREECE | yes | 2000 |
| ALVADURÃO | green | ALVADURÃO | PRT051 | PRT051-52114 | PORTUGAL | yes | 2008 |
| Aubun | black | Aubun | FRA139 | FRA139-49Mtp14 | FRANCE | yes | 2001 |
| Augster | | | AUT024 | AUTXX01-Leth-10 | | | |
| Avanà | black | Avanà | ITA360 | ITA360-144 | ITALY | yes | 2007 |
| Avarenchetto | black | | ITA360 | ITA360-215 | ITALY | no reference | 2009 |
| BAKATOR, PIROS TÜDOSZINU * | rose | | HUN045 | HUN045-65 | | | 2010 |
| BANATI RIZLING | green | | HUN045 | HUN045-83 | | | 2010 |
| Barbera 'd Davi | black | Barbera 'd Davi | ITA360 | ITA360-179 | ITALY | yes | 2008 |

Figure 9: Characterisation data of the accession “Aubun”




| OIV Code | Descriptor | Notation | Notation text |
|---|---|---|---|
| OIV 001 | Young shoot: opening of the shoot tip | 5 | fully open |
| OIV 003 | Young shoot: intensity of anthocyanin coloration on prostrate hairs of the shoot tip | 3 | low |
| OIV 004 | Young shoot: density of prostrate hairs on the shoot tip | 5 | medium |
| OIV 006 | Shoot: attitude (before tying) | 1 | erect |
| OIV 007 | Shoot: color of the dorsal side of internodes | 2 | green and red |
| OIV 008 | Shoot: color of the ventral side of internodes | 1 | green |
| OIV 015-1 | Shoot: distribution of anthocyanin coloration on the bud scales | | |
| OIV 015-2 | Shoot: intensity of anthocyanin coloration on the bud scales | 1 | none or very weak |
| OIV 053 | Young leaf: density of prostrate hairs between main veins on lower side of blade (4th leaf) | 1 | none or very low |

**2.3** *Photo search* provides photos from the described accessions.

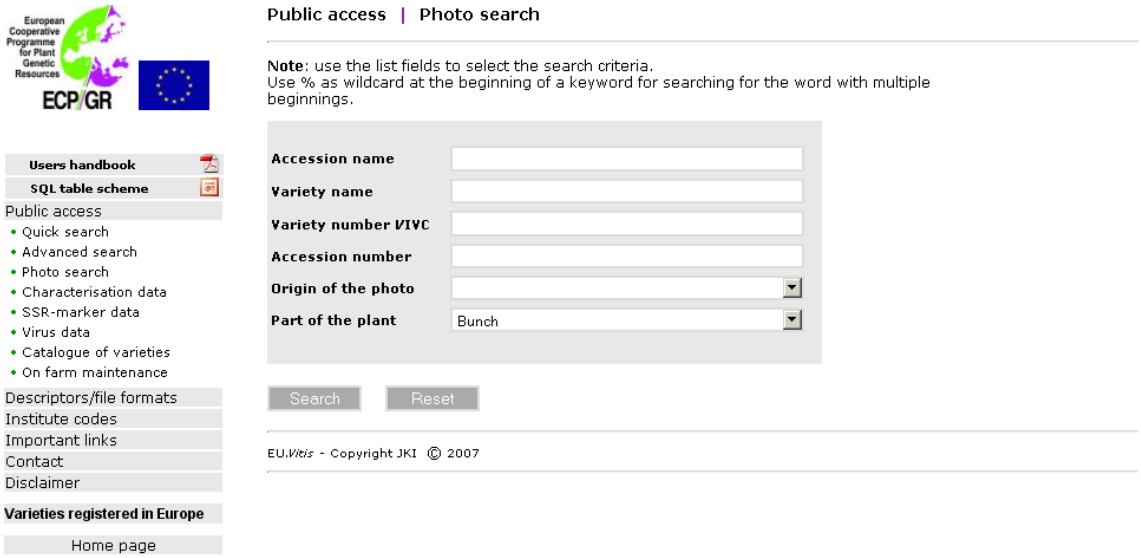



Figure 10: Of 1181 accessions photos from bunches are available

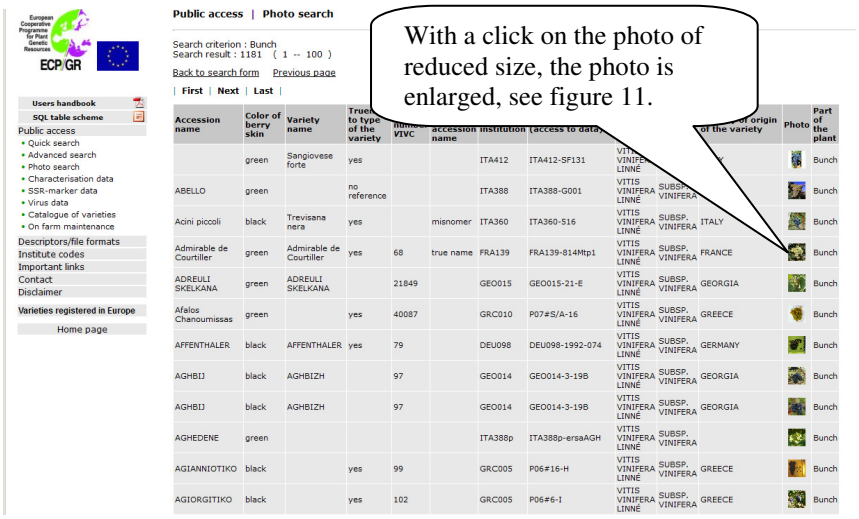
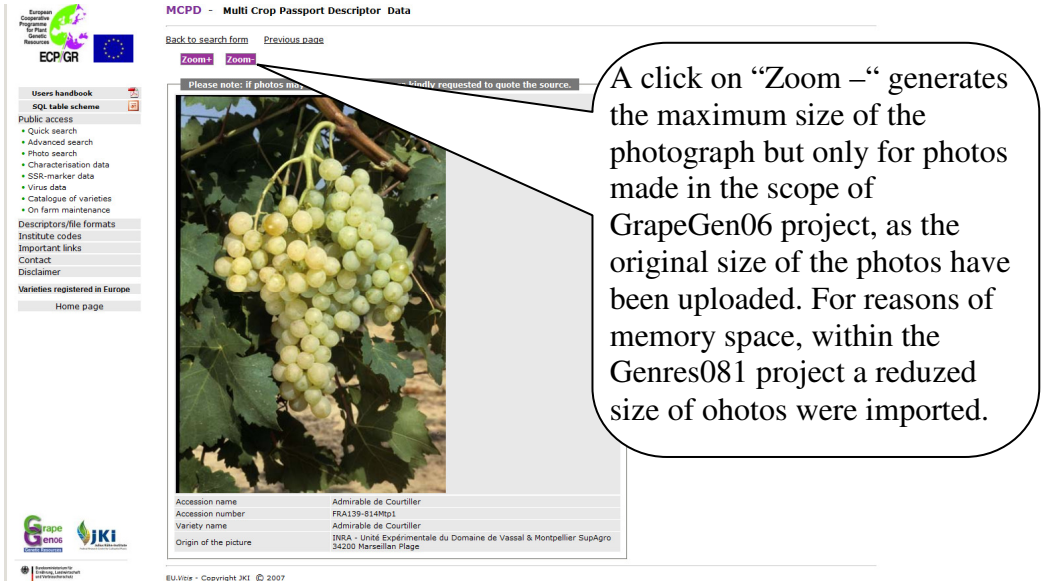



Figure 11: Bunch of the accession "Admirable de Courtiller"



**2.4** *Characterisation* data leads to the ampelographic data of all described accessions and offers a delimited search as well.

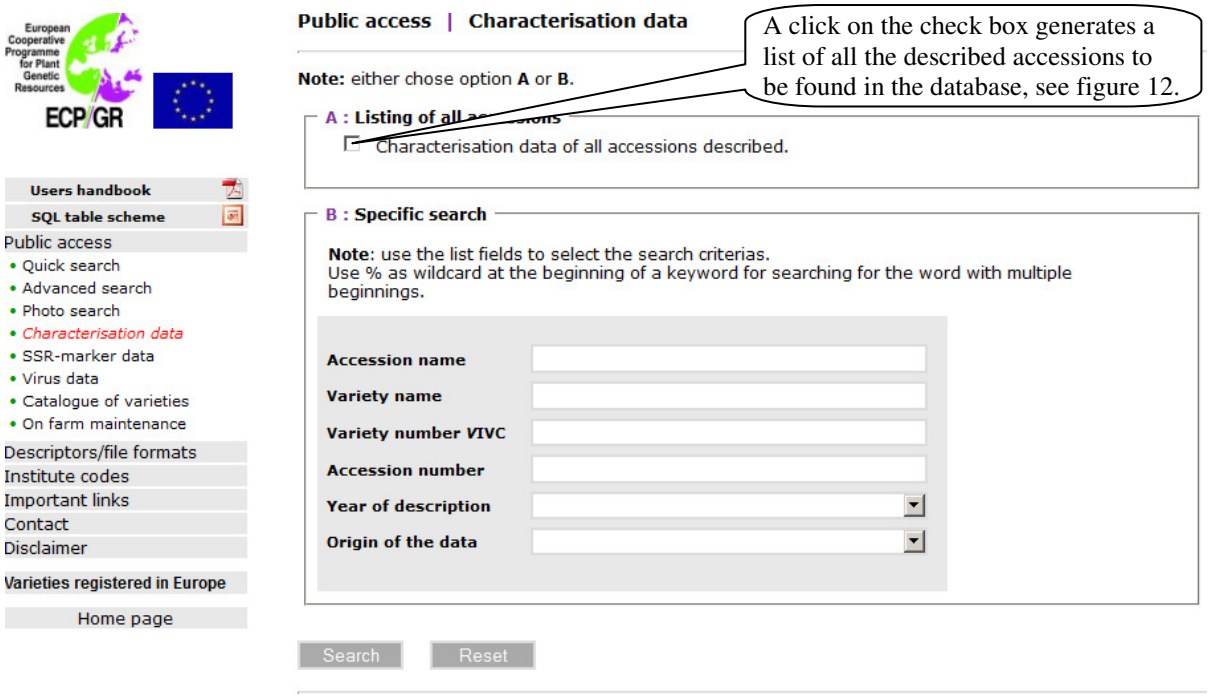
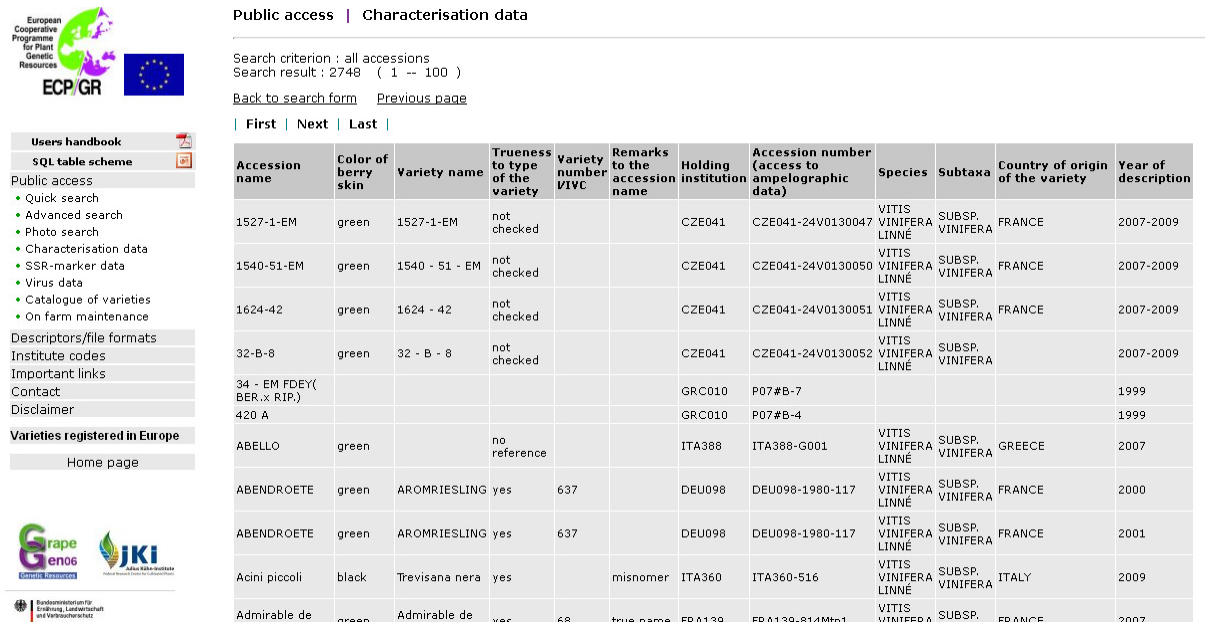



Figure 12: At the moment (February, 2012) the database encompasses 2748 descriptions. Some accessions have been described twice. Access to ampelographic data and photos is described in figures 4-6 and 8.



Public access | Characterisation data

Search criterion : all accessions
Search result : 2748 ( 1 -- 100 )

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| First | Next | Last |

| Accession name | Color of berry skin | Variety name | Trueness to type of the variety | Variety number VIVC | Remarks to the accession name | Holding institution | Accession number (access to ampelographic data) | Species | Subtaxa | Country of origin of the variety | Year of description |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1527-1-EM | green | 1527-1-EM | not checked | | | CZE041 | CZE041-24V0130047 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | FRANCE | 2007-2009 |
| 1540-51-EM | green | 1540 - 51 - EM | not checked | | | CZE041 | CZE041-24V0130050 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | FRANCE | 2007-2009 |
| 1624-42 | green | 1624 - 42 | not checked | | | CZE041 | CZE041-24V0130051 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | FRANCE | 2007-2009 |
| 32-B-8 | green | 32 - B - 8 | not checked | | | CZE041 | CZE041-24V0130052 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | | 2007-2009 |
| 34 - EM FDEY( BER.x RIP.) | | | | | | GRC010 | P07#B-7 | | | | 1999 |
| 420 A | | | | | | GRC010 | P07#B-4 | | | | 1999 |
| ABELLO | green | | no reference | | | ITA388 | ITA388-G001 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | GREECE | 2007 |
| ABENDROETE | green | AROMRIESLING | yes | 637 | | DEU098 | DEU098-1980-117 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | FRANCE | 2000 |
| ABENDROETE | green | AROMRIESLING | yes | 637 | | DEU098 | DEU098-1980-117 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | FRANCE | 2001 |
| Acini piccoli | black | Trevisana nera | yes | | misnomer | ITA360 | ITA360-516 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | ITALY | 2009 |
| Admirable de | green | Admirable de | yes | 68 | true name | FRA139 | FRA139-814Mtp1 | VITIS | SUBSP. | FRANCE | 2007 |

**2.5** *SSR-marker data* access is possible by subscription. The conditions to be agreed upon are specified. To subscribe you have to address to Erika Maul, as indicated in the text. A username and a password will be provided.

Figure 13: To register for SSR-marker data admission read carefully the specifications below.

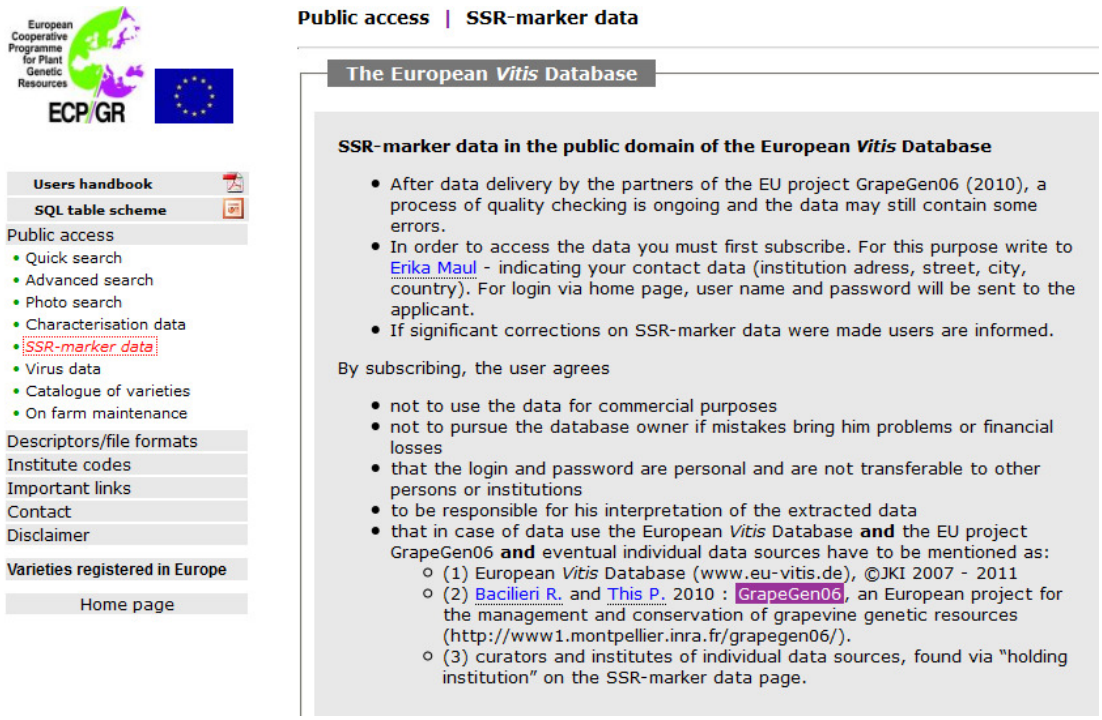
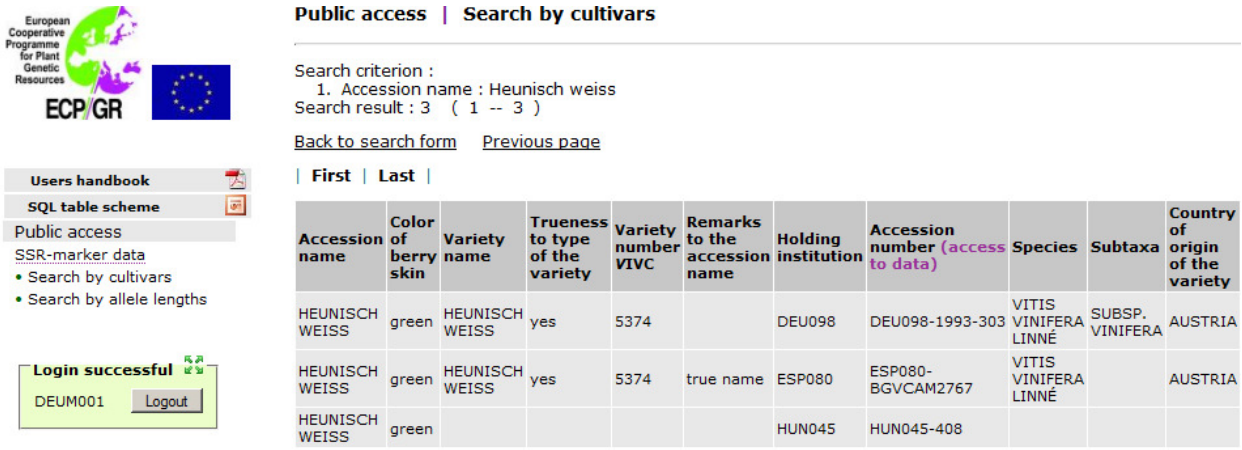



Figure 14: Two search possibilities are offered: Search by cultivars and search by allele lengths. Example: Search for SSR-marker data of accessions named Heunisch weiss.

Figure 15: For three accessions named Heunisch weiss SSR-marker data are available. With a click on the accession number you have access to the data.



**Public access | Search by cultivars**

Search criterion :
1. Accession name : Heunisch weiss

Search result : 3 ( 1 -- 3 )

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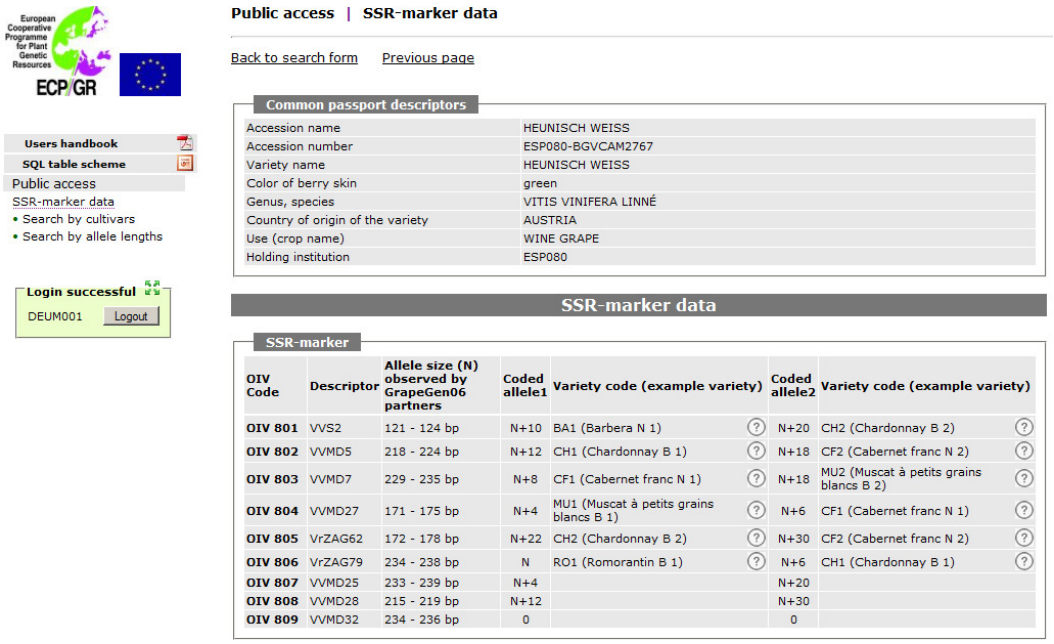
| Accession name | Color of berry skin | Variety name | Trueness to type of the variety | Variety number VIVC | Remarks to the accession name | Holding institution | Accession number (access to data) | Species | Subtaxa | Country of origin of the variety |
|---|---|---|---|---|---|---|---|---|---|---|
| HEUNISCH WEISS | green | HEUNISCH WEISS | yes | 5374 | | DEU098 | DEU098-1993-303 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | AUSTRIA |
| HEUNISCH WEISS | green | HEUNISCH WEISS | yes | 5374 | true name | ESP080 | ESP080-BGVCAM2767 | VITIS VINIFERA LINNÉ | | AUSTRIA |
| HEUNISCH WEISS | green | | | | | HUN045 | HUN045-408 | | | |

Figure 16: The coded SSR-marker data of the accession Heunisch weiss, described by ESP080.



**Public access | SSR-marker data**

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**Common passport descriptors**

| | |
|---|---|
| Accession name | HEUNISCH WEISS |
| Accession number | ESP080-BGVCAM2767 |
| Variety name | HEUNISCH WEISS |
| Color of berry skin | green |
| Genus, species | VITIS VINIFERA LINNÉ |
| Country of origin of the variety | AUSTRIA |
| Use (crop name) | WINE GRAPE |
| Holding institution | ESP080 |

**SSR-marker data**

**SSR-marker**

| OIV Code | Descriptor | Allele size (N) observed by GrapeGen06 partners | Coded allele1 | Variety code (example variety) | Coded allele2 | Variety code (example variety) |
|---|---|---|---|---|---|---|
| OIV 801 | VVS2 | 121 - 124 bp | N+10 | BA1 (Barbera N 1) | N+20 | CH2 (Chardonnay B 2) |
| OIV 802 | VVMD5 | 218 - 224 bp | N+12 | CH1 (Chardonnay B 1) | N+18 | CF2 (Cabernet franc N 2) |
| OIV 803 | VVMD7 | 229 - 235 bp | N+8 | CF1 (Cabernet franc N 1) | N+18 | MU2 (Muscat à petits grains blancs B 2) |
| OIV 804 | VVMD27 | 171 - 175 bp | N+4 | MU1 (Muscat à petits grains blancs B 1) | N+6 | CF1 (Cabernet franc N 1) |
| OIV 805 | VrZAG62 | 172 - 178 bp | N+22 | CH2 (Chardonnay B 2) | N+30 | CF2 (Cabernet franc N 2) |
| OIV 806 | VrZAG79 | 234 - 238 bp | N | RO1 (Romorantin B 1) | N+6 | CH1 (Chardonnay B 1) |
| OIV 807 | VVMD25 | 233 - 239 bp | N+4 | | N+20 | |
| OIV 808 | VVMD28 | 215 - 219 bp | N+12 | | N+30 | |
| OIV 809 | VVMD32 | 234 - 236 bp | 0 | | 0 | |

Figure 17: A click on the question mark the allelic ladder of markers are displayed.

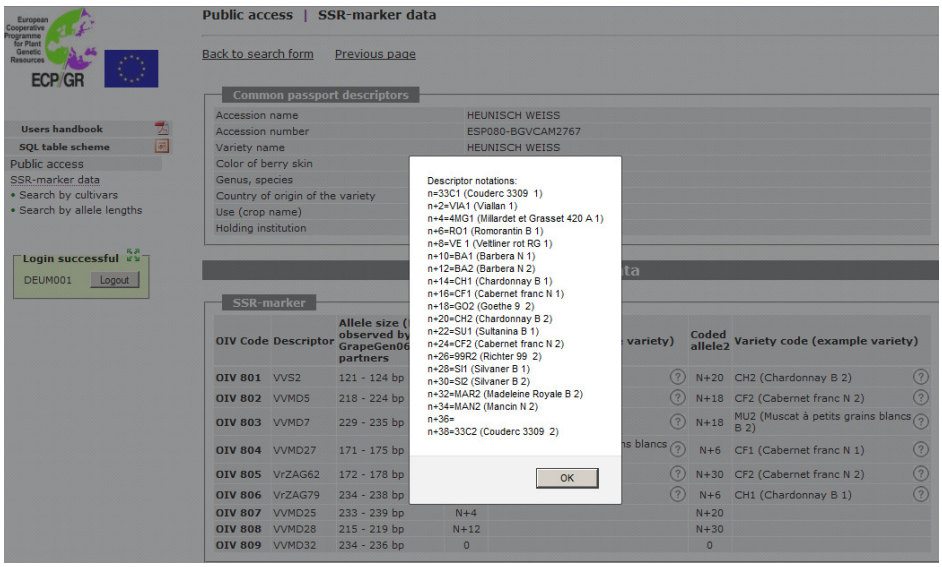
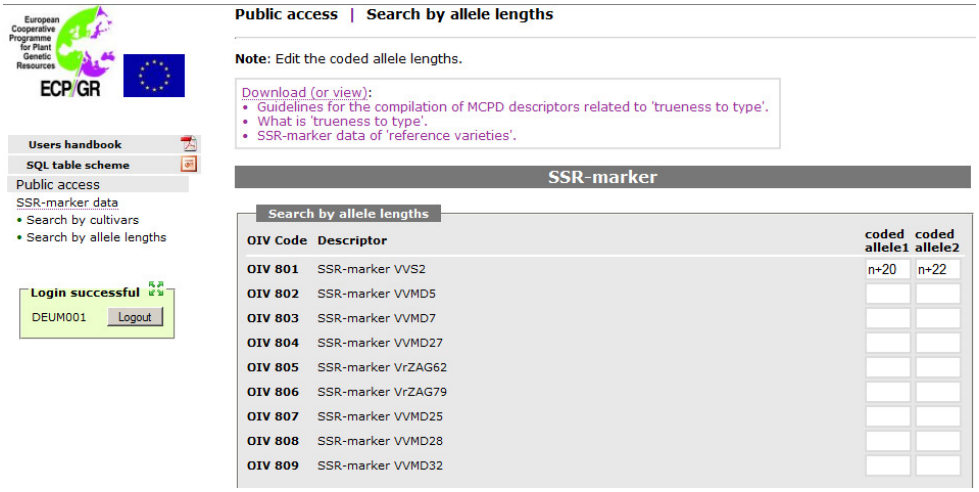


Figure 18: To search by allele length edit the coded values, e.g. for VVS2 “n+20” and “n+22”.



**Public access | Search by allele lengths**

**Note**: Edit the coded allele lengths.

Download (or view):
- Guidelines for the compilation of MCPD descriptors related to 'trueness to type'.
- What is 'trueness to type'.
- SSR-marker data of 'reference varieties'.

**SSR-marker**

Search by allele lengths

| OIV Code | Descriptor | coded allele1 | coded allele2 |
|---|---|---|---|
| OIV 801 | SSR-marker VVS2 | n+20 | n+22 |
| OIV 802 | SSR-marker VVMD5 | | |
| OIV 803 | SSR-marker VVMD7 | | |
| OIV 804 | SSR-marker VVMD27 | | |
| OIV 805 | SSR-marker VrZAG62 | | |
| OIV 806 | SSR-marker VrZAG79 | | |
| OIV 807 | SSR-marker VVMD25 | | |
| OIV 808 | SSR-marker VVMD28 | | |
| OIV 809 | SSR-marker VVMD32 | | |

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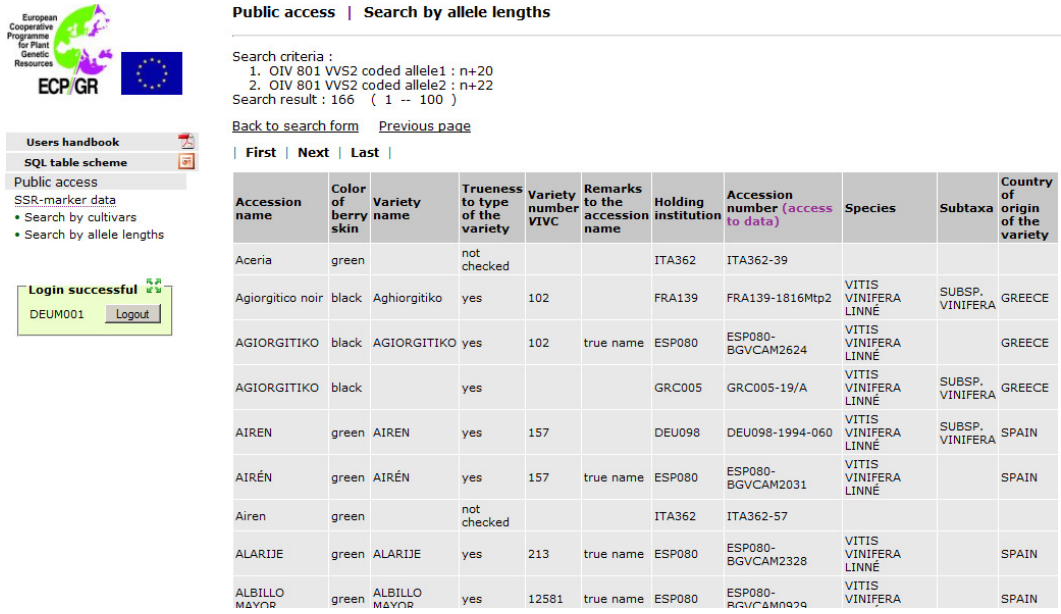
Figure 19: 166 accessions have been found with allele sizes “n+20” and “n+22” at VVS2 locus.



**Public access | Search by allele lengths**

Search criteria :
1. OIV 801 VVS2 coded allele1 : n+20
2. OIV 801 VVS2 coded allele2 : n+22

Search result : 166 ( 1 -- 100 )

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| First | Next | Last |

| Accession name | Color of berry skin | Variety name | Trueness to type of the variety | Variety number VIVC | Remarks to the accession name | Holding institution | Accession number (access to data) | Species | Subtaxa | Country of origin of the variety |
|---|---|---|---|---|---|---|---|---|---|---|
| Aceria | green | | not checked | | | ITA362 | ITA362-39 | | | |
| Agiorgitico noir | black | Aghiorgitiko | yes | 102 | | FRA139 | FRA139-1816Mtp2 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | GREECE |
| AGIORGITIKO | black | AGIORGITIKO | yes | 102 | true name | ESP080 | ESP080-BGVCAM2624 | VITIS VINIFERA LINNÉ | | GREECE |
| AGIORGITIKO | black | | yes | | | GRC005 | GRC005-19/A | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | GREECE |
| AIREN | green | AIREN | yes | 157 | | DEU098 | DEU098-1994-060 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | SPAIN |
| AIRÉN | green | AIRÉN | yes | 157 | true name | ESP080 | ESP080-BGVCAM2031 | VITIS VINIFERA LINNÉ | | SPAIN |
| Airen | green | | not checked | | | ITA362 | ITA362-57 | | | |
| ALARIJE | green | ALARIJE | yes | 213 | true name | ESP080 | ESP080-BGVCAM2328 | VITIS VINIFERA LINNÉ | | SPAIN |
| ALBILLO MAYOR | green | ALBILLO MAYOR | yes | 12581 | true name | ESP080 | ESP080-BGVCAM0929 | VITIS VINIFERA | | SPAIN |

Users handbook
SQL table scheme
Public access
SSR-marker data
• Search by cultivars
• Search by allele lengths

Login successful
DEUM001 Logout

Figure 20: With a click on “SSR-marker data of reference varieties” the coded allele sizes of 46 reference varieties can be either viewed or downloaded

| | Work | 1-INSTCC | 2-ACCENUM | 11-ACCENAN | A-Variety na | B-BERRY C | VVMD5 | VVMD5 | VVMD7 | VVMD7 | VVMD25 | VVMD25 | VVMD27 | VVMD27 | VVMD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | WP1 | FRA139 | FRA139-18M | Carignan | Cariñena ma | BLACK | N+6 | N+12 | N+8 | N+18 | N+4 | N+20 | N+4 | N+10 | N+2 |
| 3 | WP1 | FRA139 | FRA139-64M | Mourvèdre | Mourvèdre | BLACK | N+4 | N+18 | N+18 | N+18 | N+6 | N+28 | N+4 | N+14 | N+28 |
| 4 | WP1 | FRA139 | FRA139-25M | Furmint | Tokay | GREEN | N+4 | N+18 | N+8 | N+18 | N+4 | N+6 | N+4 | N+19 | N+12 |
| 5 | WP1 | FRA139 | FRA139-74M | Ugni blanc | Ugni blanc U | GREEN | N+4 | N+10 | N+18 | N+22 | N+6 | N+20 | N+4 | N+8 | N+28 |
| 6 | WP1 | FRA139 | FRA139-555N | Muscat à pet | Moscato di C | GREEN | N+6 | N+14 | N+2 | N+18 | N+6 | N+14 | N+4 | N+19 | N+30 |
| 7 | WP1 | FRA139 | FRA139-308N | Muscat d'Ale | Muscat d'Ale | GREEN | N+6 | N+10 | N+18 | N+20 | N+14 | N+14 | N+4 | N+19 | N+28 |
| 8 | WP1 | FRA139 | FRA139-443N | Mauzac | Mauzac blan | GREEN | N+8 | N+10 | N+8 | N+18 | N+14 | N+14 | N+10 | N+16 | N+12 |
| 9 | WP1 | FRA139 | FRA139-326N | Merlot | Merlot noir | BLACK | N+6 | N+14 | N+8 | N+22 | N+6 | N+14 | N+10 | N+14 | N+18 |
| 10 | WP1 | FRA139 | FRA139-258N | Gewurztram | Gewürztram | ROSE | N+4 | N+12 | N+8 | N+8 | N+4 | N+20 | N+6 | N+19 | N+12 |
| 11 | WP1 | FRA139 | FRA139-284N | Velteliner rc | Velteliner rc | ROSE | N+18 | N+24 | N+8 | N+22 | N+4 | N+6 | N+8 | N+19 | N+30 |
| 12 | WP1 | FRA139 | FRA139-193N | Pinot noir | Pinot fin | BLACK | N+6 | N+16 | N+8 | N+12 | N+4 | N+14 | N+10 | N+14 | N+2 |
| 13 | WP1 | FRA139 | FRA139-270N | Sylvaner | Sylvain Froel | GREEN | N+4 | N+10 | N+12 | N+16 | N+6 | N+14 | N+14 | N+19 | N+12 |
| 14 | WP1 | FRA139 | FRA139-199N | Chardonnay | Chardonnay | GREEN | N+12 | N+16 | N+8 | N+12 | N+4 | N+20 | N+6 | N+14 | N+2 |
| 15 | WP1 | FRA139 | FRA139-322N | Cabernet-Sa | Cabernet Sa | BLACK | N+6 | N+12 | N+8 | N+8 | N+6 | N+20 | N+4 | N+10 | N+18 |
| 16 | WP1 | FRA139 | FRA139-324N | Cabernet fra | Cabernet fra | BLACK | N+4 | N+10 | N+12 | N+24 | N+14 | N+20 | N+14 | N+19 | N+18 |
| 17 | WP1 | FRA139 | FRA139-304N | Romorantin | Romorantin | GREEN | N+12 | N+16 | N+12 | N+18 | N+4 | N+14 | N+4 | N+14 | N+12 |
| 18 | WP1 | FRA139 | FRA139-1216 | Mancin | Mancin | BLACK | N+10 | N+16 | N+8 | N+8 | N+4 | N+20 | N | N+14 | N+32 |
| 19 | WP1 | FRA139 | FRA139-450N | Portugais ble | Portugais ble | BLACK | N+4 | N+10 | N+12 | N+24 | N+14 | N+14 | N+6 | N+19 | N+12 |
| 20 | WP1 | FRA139 | FRA139-653N | Madeleine r | Madeleine R | GREEN | N+4 | N+4 | N+16 | N+32 | N+4 | N+14 | N+8 | N+19 | N+20 |
| 21 | WP1 | FRA139 | FRA139-814N | Admirable d | Admirable d | GREEN | N+4 | N+14 | N+8 | N+12 | N+6 | N+20 | N+10 | N+19 | N+18 |
| 22 | WP1 | FRA139 | FRA139-1595 | Hans | Hansen | ROSE | N+14 | N+16 | N+8 | N+26 | N+4 | N+14 | N | N+14 | N+20 |

## 2.6 *Virus data* of most of the characterized accessions are available

Figure 21: Two options exist: either you select “A” to obtain all accessions for which virus status has been determined or you carry out a preselection by list fields, using “B” Specific search.

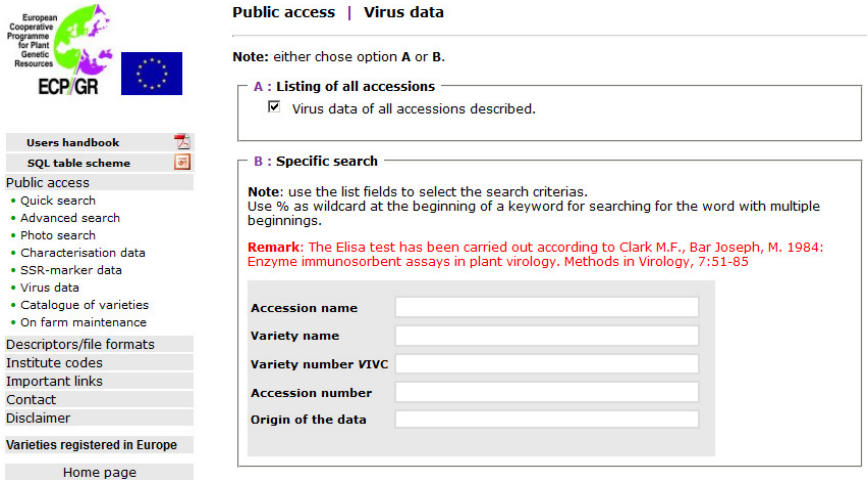
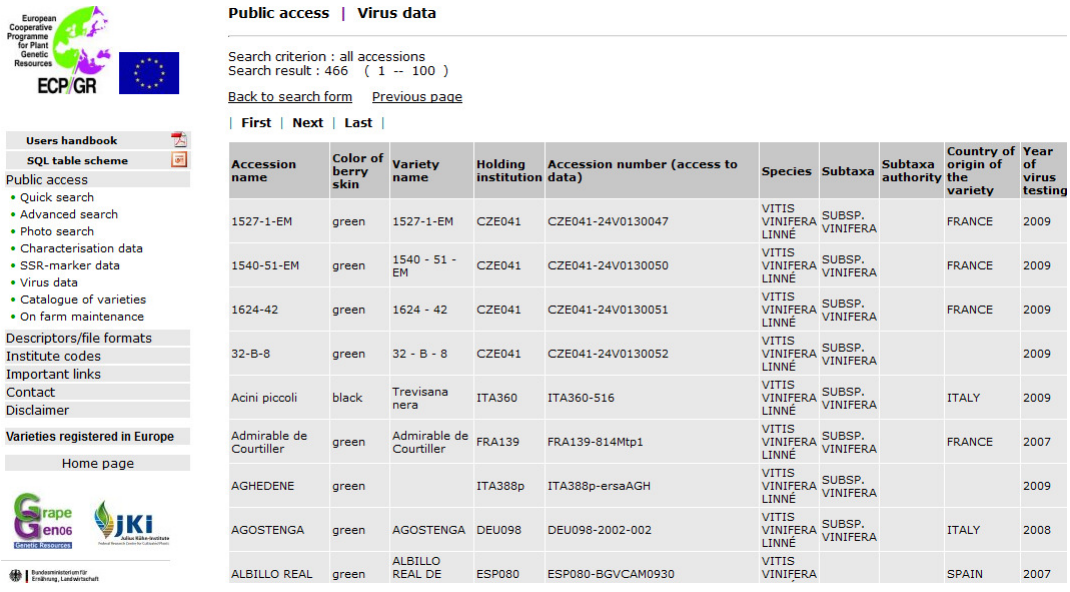



Figure 22: By choosing option “A” the total of analysed accessions turned out to be 466 (February 2012)




| Accession name | Color of berry skin | Variety name | Holding institution | Accession number (access to data) | Species | Subtaxa | Subtaxa authority | Country of origin of the variety | Year of virus testing |
|---|---|---|---|---|---|---|---|---|---|
| 1527-1-EM | green | 1527-1-EM | CZE041 | CZE041-24V0130047 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | | FRANCE | 2009 |
| 1540-51-EM | green | 1540 - 51 - EM | CZE041 | CZE041-24V0130050 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | | FRANCE | 2009 |
| 1624-42 | green | 1624 - 42 | CZE041 | CZE041-24V0130051 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | | FRANCE | 2009 |
| 32-B-8 | green | 32 - B - 8 | CZE041 | CZE041-24V0130052 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | | | 2009 |
| Acini piccoli | black | Trevisana nera | ITA360 | ITA360-516 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | | ITALY | 2009 |
| Admirable de Courtiller | green | Admirable de Courtiller | FRA139 | FRA139-814Mtp1 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | | FRANCE | 2007 |
| AGHEDENE | green | | ITA388p | ITA388p-ersaAGH | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | | | 2009 |
| AGOSTENGA | green | AGOSTENGA | DEU098 | DEU098-2002-002 | VITIS VINIFERA LINNÉ | SUBSP. VINIFERA | | ITALY | 2008 |
| ALBILLO REAL | green | ALBILLO REAL DE | ESP080 | ESP080-BGVCAM0930 | VITIS VINIFERA | | | SPAIN | 2007 |

**2.7** *Catalogue of varieties* offers to users a one side description of an accession downloadable as a pdf document. The description encompasses morphological and agronomical characteristics and photos of the shoot tip, leaves and a bunch.

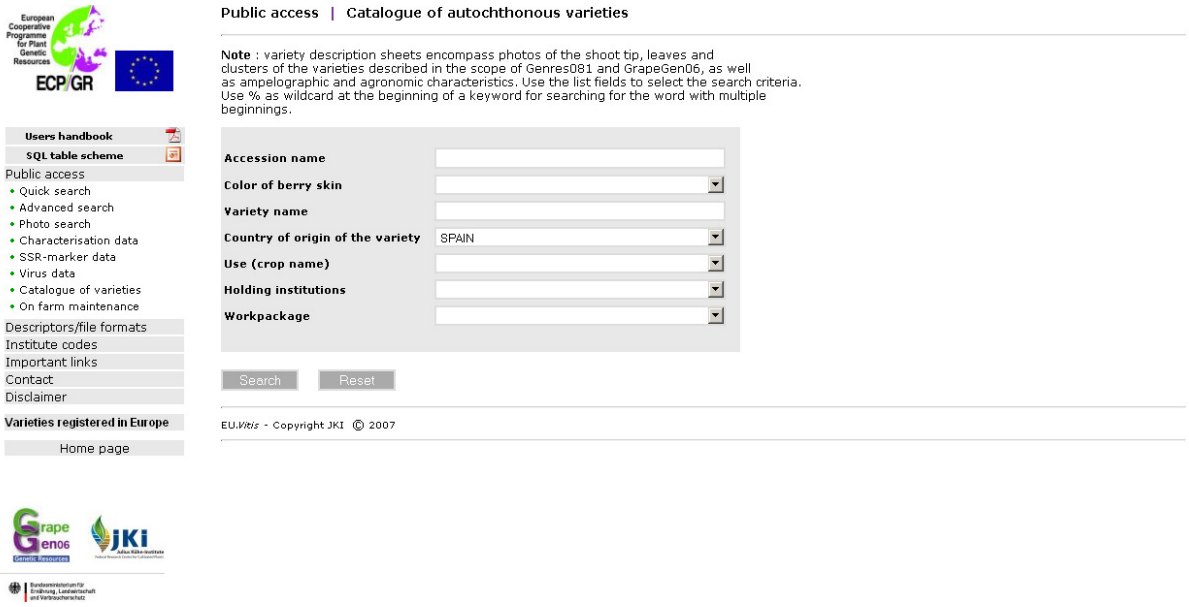



Figure 23: With respect to country of origin of the variety “Spain”, 487 accessions have been described. For the generation of a pdf document the accession “Forcallat”, described by ESP080 has been chosen.

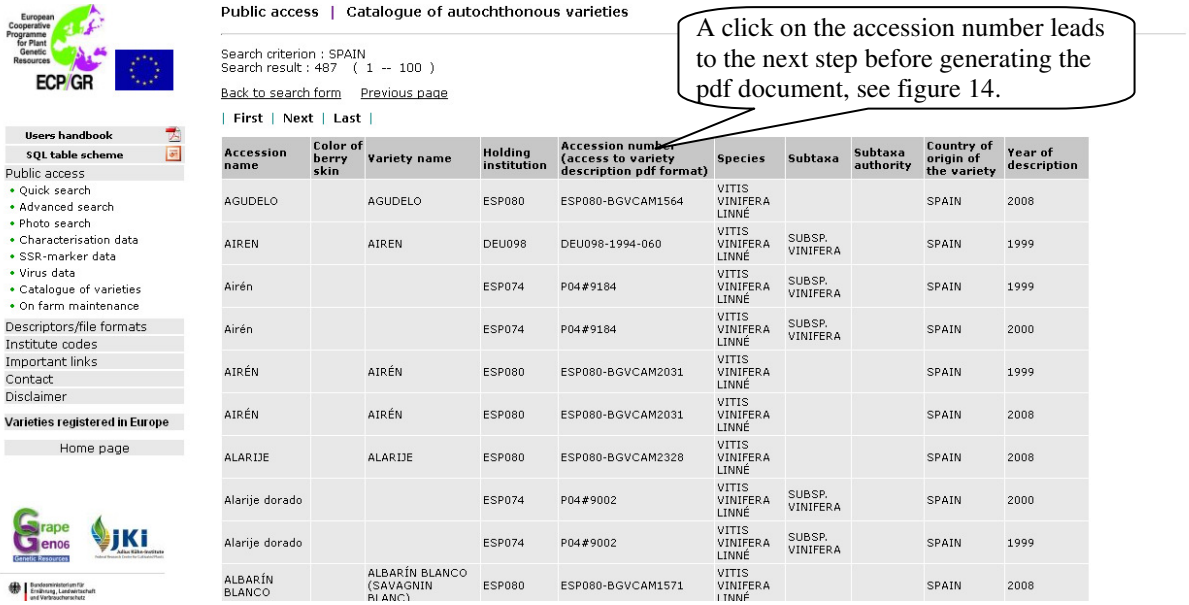


Figure 24: If several photos of one category exist, the most appropriate can be chosen.

Figure 25: The finalized pdf document of “Forcallat” can be downloaded.

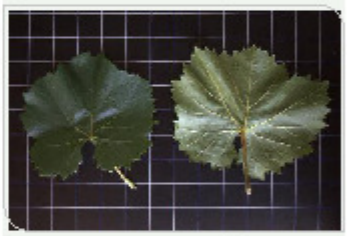
# FORCALLAT (ESP080-BGVCAM0973) B

| Multi Crop Passport Descriptor Data | |
|---|---|
| Color of berry skin | green |
| Variety name | FORCALLAT |
| Genus, Species | VITIS VINIFERA LINNÉ |
| Country of origin of the variety | SPAIN |
| Use (crop name) | WINE GRAPE |
| Holding institution | Instituto Madrileño de Investigación Agraria y Alimentaria (I.M.I.A)<br>Finca "El Encín", Alcalá de Henares - I.M.I.D.R.A<br>E - 28800 Madrid |

| Priority descriptor data | | |
|---|---|---|
| OIV 004 | Young shoot: density of prostrate hairs on the shoot tip | high |
| OIV 051 | Young leaf: color of upper side of blade (4th leaf) | bronze |
| OIV 068 | Mature leaf: number of lobes | seven |
| OIV 070 | Mature leaf: area of anthocyanin coloration of main veins on the upper side of blade | absent |
| OIV 076 | Mature leaf: shape of teeth | both sides straight |
| OIV 079 | Mature leaf: degree of opening / overlapping of petiole sinus | open |
| OIV 084 | Mature leaf: density of prostrate hairs between main veins on lower side of blade | low |
| OIV 087 | Mature leaf: density of erect hairs on main veins on lower side of blade | low |
| OIV 223 | Berry: shape | broad ellipsoid |
| OIV 225 | Berry: color of skin | green yellow |

| Bunch / berry descriptor data | | |
|---|---|---|
| OIV 202 | Bunch: length (peduncle excluded) | |
| OIV 204 | Bunch: density | loose / medium |
| OIV 206 | Bunch: length of peduncle of primary bunch | short (about 50 mm) |
| OIV 209 | Bunch: number of wings of the primary bunch | 1-2 wings, 3-4 wings, |
| OIV 220 | Berry: length | |
| OIV 221 | Berry: width | |
| OIV 502 | Bunch: single bunch weight | |
| OIV 503 | Berry: single berry weight | low (about 3 g) |

| Agronomic features | | |
|---|---|---|
| OIV 301 | Time of bud burst | very early |
| OIV 303 | Time of beginning of berry ripening (veraison) | |
| OIV 351 | Vigor of shoot growth | |
| OIV 504 | Yield per m2 | |
| OIV 505 | Sugar content of must | high (about 21 %) |



**2.8** *On-farm maintenance* - of neglected varieties and of minor importance - by winegrowers represents a practicable alternative to its preservation in governmental grapevine repositories. Agronomical features of such kind of germplasm have been evaluated.

Figure 26: Two options exist: either you select "A" to obtain all varieties studied or you carry out a preselection by list fields, using "B" Specific search.

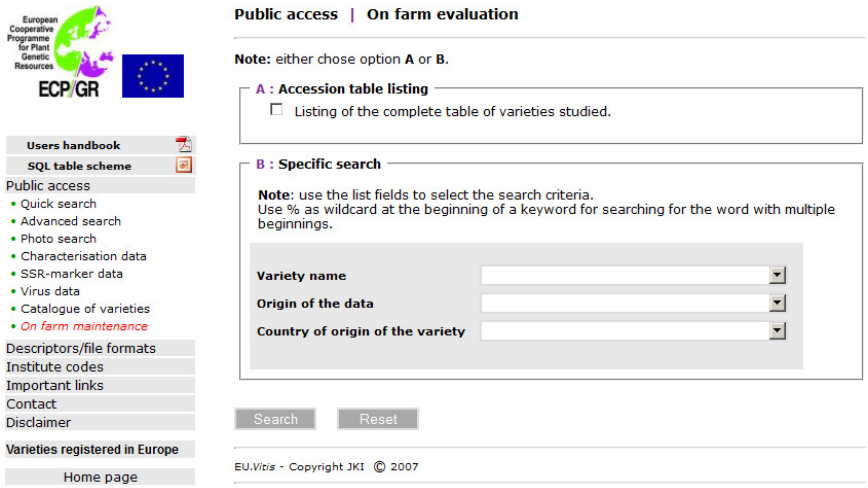
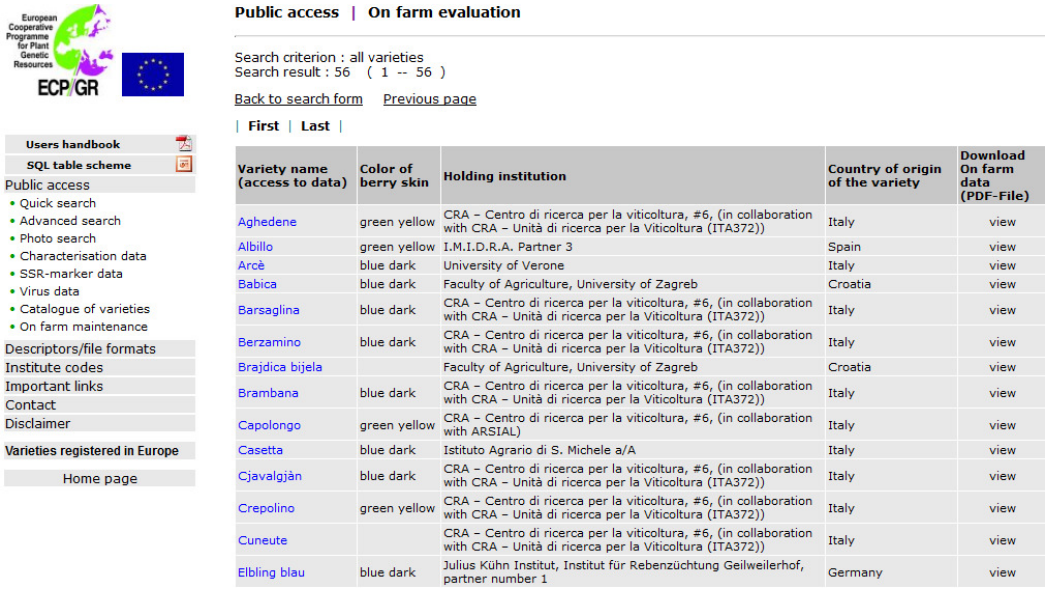
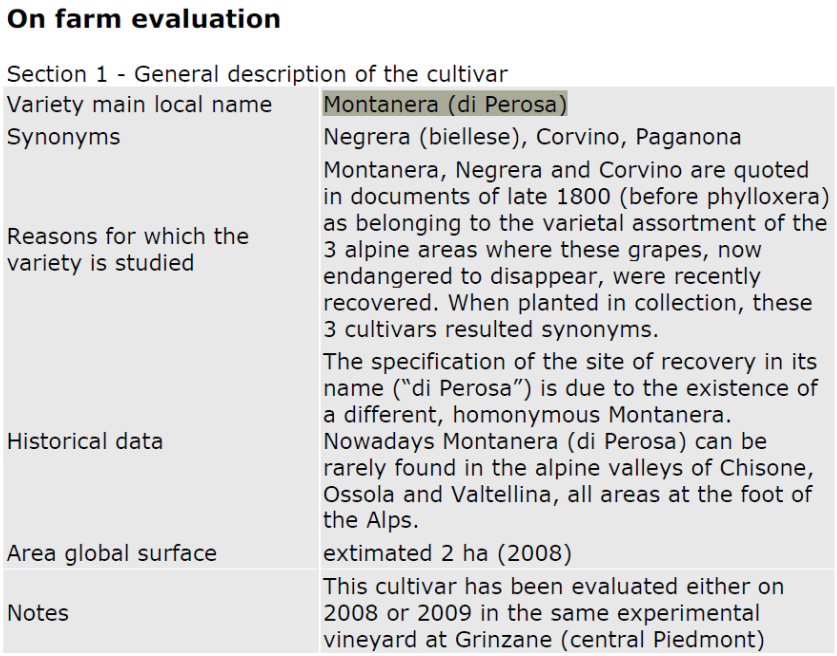



Figure 27: 56 varieties have been evaluated on-farm. A downloadable document encompasses all information about the variety divided into 6 sections, starting from "General description of the cultivar" to "Wine evaluation", see the next figure. Access to data is obtained by clicking on the "Variety name" in the 1st column.




| Variety name (access to data) | Color of berry skin | Holding institution | Country of origin of the variety | Download On farm data (PDF-File) |
|---|---|---|---|---|
| Aghedene | green yellow | CRA – Centro di ricerca per la viticoltura, #6, (in collaboration with CRA – Unità di ricerca per la Viticoltura (ITA372)) | Italy | view |
| Albillo | green yellow | I.M.I.D.R.A. Partner 3 | Spain | view |
| Arcè | blue dark | University of Verone | Italy | view |
| Babica | blue dark | Faculty of Agriculture, University of Zagreb | Croatia | view |
| Barsaglina | blue dark | CRA – Centro di ricerca per la viticoltura, #6, (in collaboration with CRA – Unità di ricerca per la Viticoltura (ITA372)) | Italy | view |
| Berzamino | blue dark | CRA – Centro di ricerca per la viticoltura, #6, (in collaboration with CRA – Unità di ricerca per la Viticoltura (ITA372)) | Italy | view |
| Brajdica bijela | | Faculty of Agriculture, University of Zagreb | Croatia | view |
| Brambana | blue dark | CRA – Centro di ricerca per la viticoltura, #6, (in collaboration with CRA – Unità di ricerca per la Viticoltura (ITA372)) | Italy | view |
| Capolongo | green yellow | CRA – Centro di ricerca per la viticoltura, #6, (in collaboration with ARSIAL) | Italy | view |
| Casetta | blue dark | Istituto Agrario di S. Michele a/A | Italy | view |
| Cjavalgjàn | blue dark | CRA – Centro di ricerca per la viticoltura, #6, (in collaboration with CRA – Unità di ricerca per la Viticoltura (ITA372)) | Italy | view |
| Crepolino | green yellow | CRA – Centro di ricerca per la viticoltura, #6, (in collaboration with CRA – Unità di ricerca per la Viticoltura (ITA372)) | Italy | view |
| Cuneute | | CRA – Centro di ricerca per la viticoltura, #6, (in collaboration with CRA – Unità di ricerca per la Viticoltura (ITA372)) | Italy | view |
| Elbling blau | blue dark | Julius Kühn Institut, Institut für Rebenzüchtung Geilweilerhof, partner number 1 | Germany | view |

Figure 28: Head of the downloaded document encompassing all information about the variety divided into 6 sections, starting from “General description of the cultivar” to “Wine evaluation”.

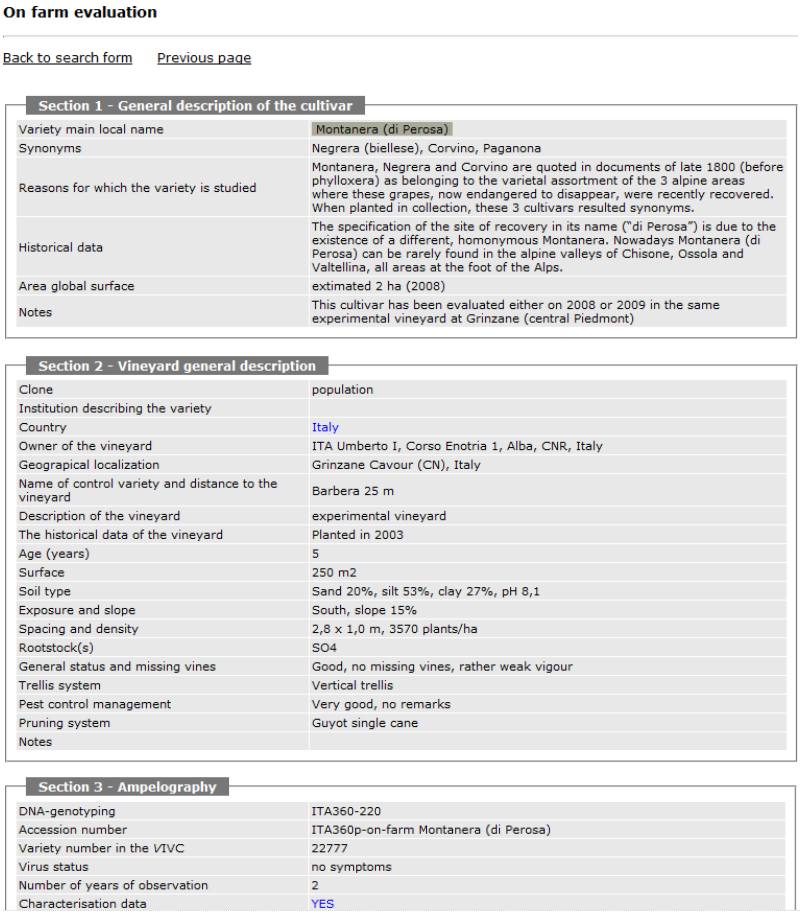


**On farm evaluation**

Section 1 - General description of the cultivar

| | |
|---|---|
| Variety main local name | Montanera (di Perosa) |
| Synonyms | Negrera (biellese), Corvino, Paganona |
| Reasons for which the variety is studied | Montanera, Negrera and Corvino are quoted in documents of late 1800 (before phylloxera) as belonging to the varietal assortment of the 3 alpine areas where these grapes, now endangered to disappear, were recently recovered. When planted in collection, these 3 cultivars resulted synonyms. |
| Historical data | The specification of the site of recovery in its name (“di Perosa”) is due to the existence of a different, homonymous Montanera. Nowadays Montanera (di Perosa) can be rarely found in the alpine valleys of Chisone, Ossola and Valtellina, all areas at the foot of the Alps. |
| Area global surface | extimated 2 ha (2008) |
| Notes | This cultivar has been evaluated either on 2008 or 2009 in the same experimental vineyard at Grinzane (central Piedmont) |

Figure 29: All information encompassing the on-farm description/evaluation of neglected cultivars.



**On farm evaluation**

Back to search form  Previous page

**Section 1 - General description of the cultivar**

| | |
|---|---|
| Variety main local name | Montanera (di Perosa) |
| Synonyms | Negrera (biellese), Corvino, Paganona |
| Reasons for which the variety is studied | Montanera, Negrera and Corvino are quoted in documents of late 1800 (before phylloxera) as belonging to the varietal assortment of the 3 alpine areas where these grapes, now endangered to disappear, were recently recovered. When planted in collection, these 3 cultivars resulted synonyms. |
| Historical data | The specification of the site of recovery in its name (“di Perosa”) is due to the existence of a different, homonymous Montanera. Nowadays Montanera (di Perosa) can be rarely found in the alpine valleys of Chisone, Ossola and Valtellina, all areas at the foot of the Alps. |
| Area global surface | extimated 2 ha (2008) |
| Notes | This cultivar has been evaluated either on 2008 or 2009 in the same experimental vineyard at Grinzane (central Piedmont) |

**Section 2 - Vineyard general description**

| | |
|---|---|
| Clone | population |
| Institution describing the variety | |
| Country | Italy |
| Owner of the vineyard | ITA Umberto I, Corso Enotria 1, Alba, CNR, Italy |
| Geograpical localization | Grinzane Cavour (CN), Italy |
| Name of control variety and distance to the vineyard | Barbera 25 m |
| Description of the vineyard | experimental vineyard |
| The historical data of the vineyard | Planted in 2003 |
| Age (years) | 5 |
| Surface | 250 m2 |
| Soil type | Sand 20%, silt 53%, clay 27%, pH 8,1 |
| Exposure and slope | South, slope 15% |
| Spacing and density | 2,8 x 1,0 m, 3570 plants/ha |
| Rootstock(s) | SO4 |
| General status and missing vines | Good, no missing vines, rather weak vigour |
| Trellis system | Vertical trellis |
| Pest control management | Very good, no remarks |
| Pruning system | Guyot single cane |
| Notes | |

**Section 3 - Ampelography**

| | |
|---|---|
| DNA-genotyping | ITA360-220 |
| Accession number | ITA360p-on-farm Montanera (di Perosa) |
| Variety number in the *VIVC* | 22777 |
| Virus status | no symptoms |
| Number of years of observation | 2 |
| Characterisation data | YES |

## Section 4 - Agronomic features

| | | |
|---|---|---|
| Partner vineyard and owner | ITA360, Grinzane, Ist.TA Umberto I | ITA360, Grinzane, Ist.TA Umberto I |
| Description of agronomic management | integrated pest control | integrated pest control |
| Year of observation | 2008 | 2009 |
| Date of first shooting | 1 April | 15 April |
| Date of first shooting of control variety | 18 April | 26 April |
| Date of veraison | 5 August | 1 August |
| Date of veraison of control variety | 19 August | 10 August |
| Date of berry ripening | 11 September | 3 September |
| Date of berry ripening of control variety | 9 October | 23 September |
| Date of the harvest as traditionally issued in the growing area | 5 October | 5 October |
| Bunch weight per plant (kg) (20 plants at the time of the harvest) | 2.44 | 2.44 |
| Yield (kg/ha) (total production at harvest/ number of plants harvested) | 8.700 (244 kg from 100 plants; 8,7 t/ha) | 8.700 (244 kg from 100 plants; 8,7 t/ha) |
| Number of bunches per plant (20 plants at the time of the harvest) | 12.6 | 6.7 |
| Average weight of a berry (g) | 2 g | 2,5 g |
| Notes | | |
| **Grape skin phenolic compounds** | | |
| Total anthocyanins [mg/kg] | | |
| • average | 2464 | 2148 |
| • standard deviation | 220 | 456 |
| Proanthocyanidins or tannins (PC) [mg/kg] | | |
| • average | 2229 | 1974 |
| • standard deviation | 143 | 285 |
| Flavanols (tannins) reactive to vanilline (FRV) [mg/kg] | | |
| • average | 437 | 522 |
| • standard deviation | 89 | 178 |
| FRV/PC | 0.2 | 0.26 |
| Total flavonoids * [mg/kg] | | |
| • average | 3741 | 5107 |
| • standard deviation | 256 | 1116 |
| **Grape seed phenolic compounds** | | |
| Total flavonoids [mg/kg] | | |
| • average | 584 | 452 |
| • standard deviation | 37 | 25 |
| Proanthocyanidins or tannins (PC) [mg/kg] | | |
| • average | 650 | 431 |
| • standard deviation | 54 | 44 |
| Flavanols (tannins) reactive to vanilline (FRV) [mg/kg] | | |
| • average | 474 | 248 |
| • standard deviation | 44 | 19 |
| FRV/PC | 0.7 | 0.6 |
| **Grape skin anthocyanin profile (%)** | | |
| Delphinidin 3-glucoside | 14.9 | 8.6 |
| Cyanidin 3-glucoside | 2.1 | 0.9 |
| Petunidin 3-glucoside | 12.2 | 9.1 |
| Peonidin 3-glucoside | 6.3 | 3.6 |
| Malvidin 3-glucoside | 41.6 | 41.5 |
| Acyl-derivatives | 22.9 | 36.3 |

## Section 5 - Enological features

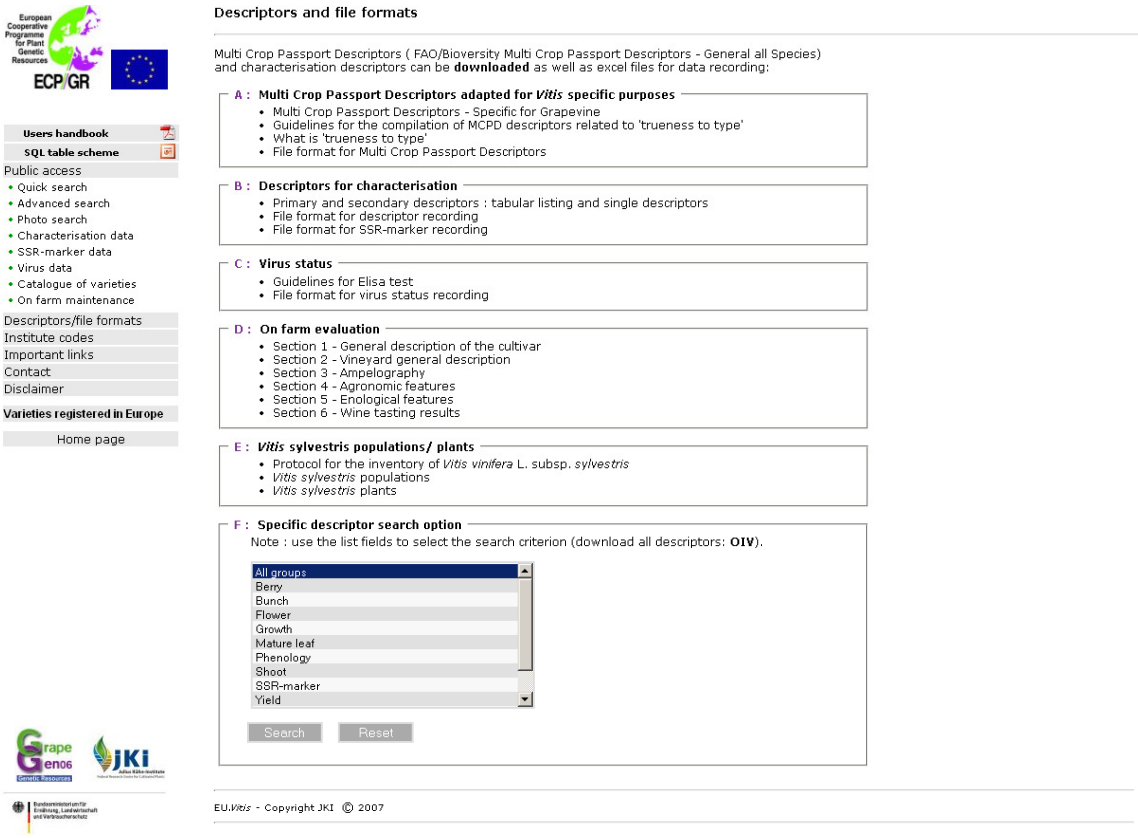
| | | |
|---|---|---|
| Harvesting year | 2008 | 2009 |
| **Must compounds** | | |
| Sugar degree (°Brix) | 25.3 | 24 |
| Titrable acidity (g/L tartaric acid) | 8.3 | 7.5 |
| pH | 3.18 | 3.25 |
| **Wine chemical composition** | | |
| Alcohol % vol | 14.04 | 14.02 |
| Sugar % | 0.19 | 0.13 |
| Total dry matter g/L | 27.3 | 28.1 |
| pH | 3.64 | 3.76 |
| Total acidity g/L H2SO4 | 6.16 | 6.15 |
| K+ mg/L | | 1793 |
| Colour intensity*** | 1.5 | 1.41 |
| Colour hue**** | 0.65 | 0.7 |
| Tartaric acid g/L | 1.76 | 1.89 |
| Malic acid g/L | traces | traces |
| Volatil acid g/L H2SO4 | | |
| Lactic acid g/L | 2.45 | 3.26 |
| Citric acid g/L | | |
| Ash g/L | 3.15 | 3.56 |
| **Wine phenolic compounds** | | |
| Total anthocyanins (mg/L) | 549 | 404 |
| Total Polyphenols Content Index or A 280 | 1573 | 1458 |
| Total flavonoids (mg/L) | 1573 | 1458 |
| Proanthocyanidins or tannins(PR) (mg/L) | 2209 | 2249 |

## Section 6 - Wine evaluation

| | | |
|---|---|---|
| Vintage | 2008 | 2009 |
| Year of degustation | 2009 | 2010 |
| Number of panelists | 9 | 9 |
| Tasting session | research institute panel (wine experts) | research institute panel (wine experts) |
| Colour | 8.6 | 8.5 |
| Aroma | 7.7 | 7.7 |
| Taste | 8 | 7.6 |
| Overall assessment | 8 | 7.8 |
| Remarks | | short skin contact |

**2.9** *Descriptors/file formats* lead to both, the descriptors and the excel file format for descriptor recording.

Special attention has to be paid on section "A: Multi Crop Passport Descriptors adopted for *Vitis* specific purposes", as outlined in paragraph 1.1 General remarks.




**2.10** *Institute codes* mentioned in the MCPD data of the partners can be retrieved. Contact data of institute codes are provided.

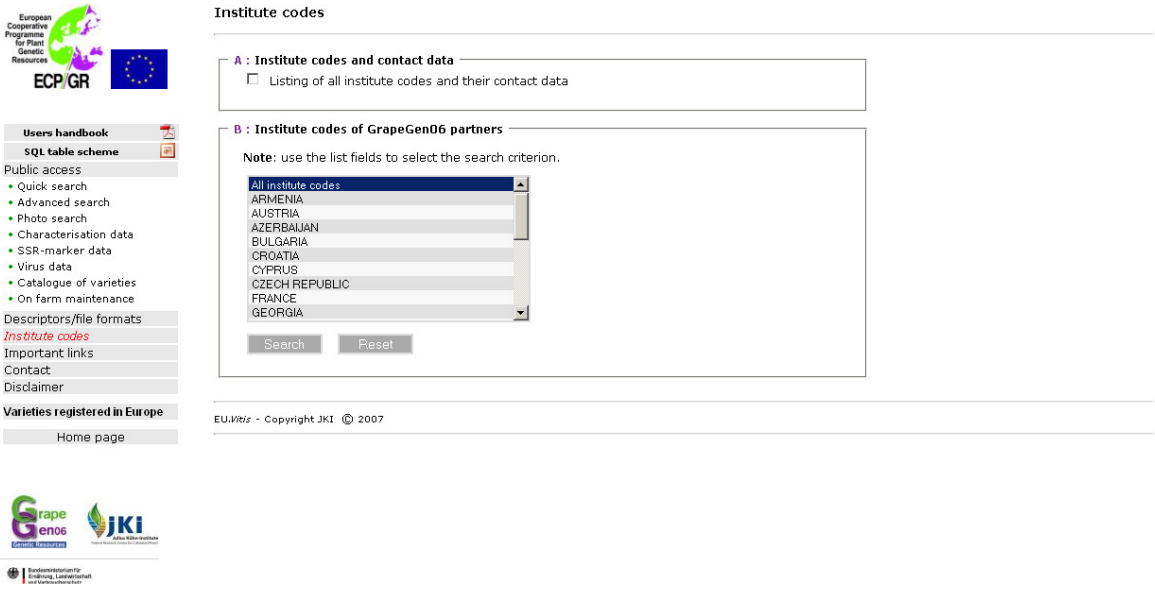
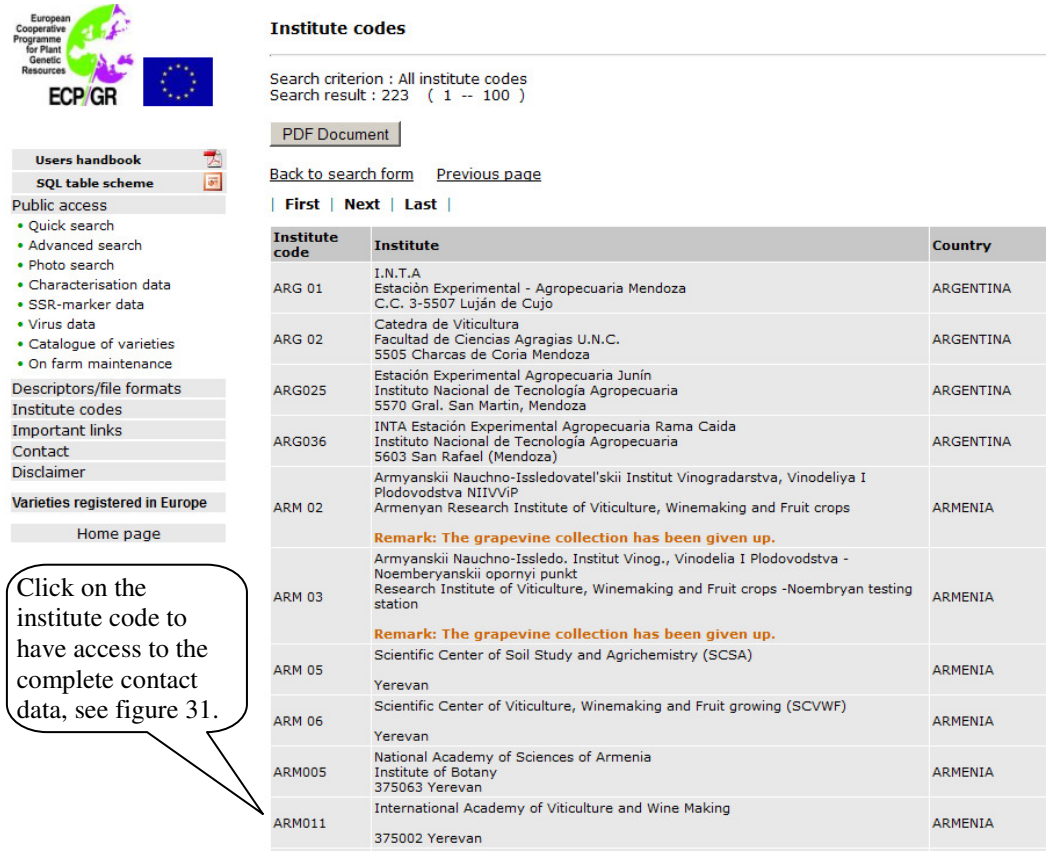


Figure 30: Institute codes occurring in the MCPD data as holding institutions, donors, breeders, collecting institutes or duplicate holders.




**Institute codes**

Search criterion : All institute codes
Search result : 223 ( 1 -- 100 )

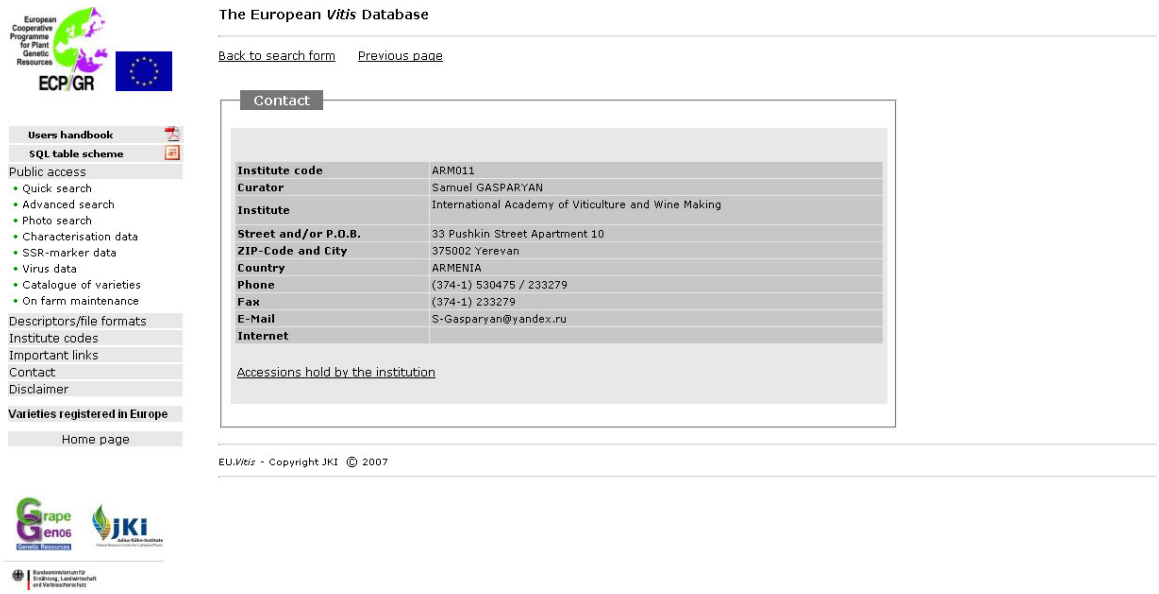
PDF Document

Back to search form Previous page

| First | Next | Last |

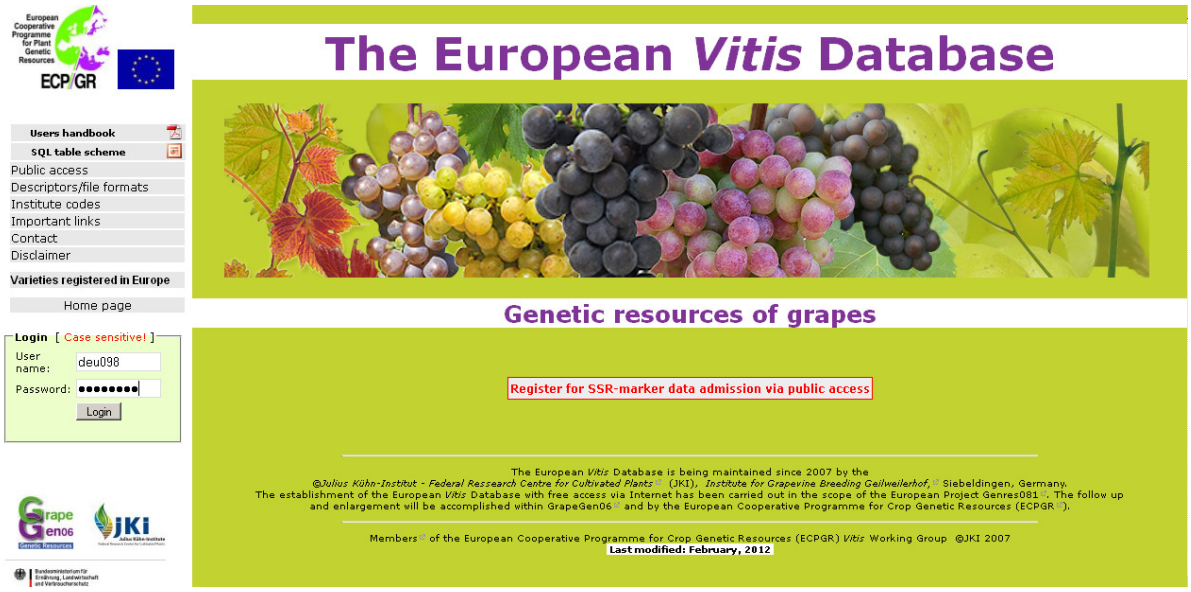
| Institute code | Institute | Country |
|---|---|---|
| ARG 01 | I.N.T.A<br>Estación Experimental - Agropecuaria Mendoza<br>C.C. 3-5507 Luján de Cujo | ARGENTINA |
| ARG 02 | Catedra de Viticultura<br>Facultad de Ciencias Agragias U.N.C.<br>5505 Charcas de Coria Mendoza | ARGENTINA |
| ARG025 | Estación Experimental Agropecuaria Junín<br>Instituto Nacional de Tecnología Agropecuaria<br>5570 Gral. San Martin, Mendoza | ARGENTINA |
| ARG036 | INTA Estación Experimental Agropecuaria Rama Caida<br>Instituto Nacional de Tecnología Agropecuaria<br>5603 San Rafael (Mendoza) | ARGENTINA |
| ARM 02 | Armyanskii Nauchno-Issledovatel'skii Institut Vinogradarstva, Vinodeliya I Plodovodstva NIIVViP<br>Armenyan Research Institute of Viticulture, Winemaking and Fruit crops<br>**Remark: The grapevine collection has been given up.** | ARMENIA |
| ARM 03 | Armyanskii Nauchno-Issledo. Institut Vinog., Vinodelia I Plodovodstva - Noemberyanskii opornyi punkt<br>Research Institute of Viticulture, Winemaking and Fruit crops -Noembryan testing station<br>**Remark: The grapevine collection has been given up.** | ARMENIA |
| ARM 05 | Scientific Center of Soil Study and Agrichemistry (SCSA)<br>Yerevan | ARMENIA |
| ARM 06 | Scientific Center of Viticulture, Winemaking and Fruit growing (SCVWF)<br>Yerevan | ARMENIA |
| ARM005 | National Academy of Sciences of Armenia<br>Institute of Botany<br>375063 Yerevan | ARMENIA |
| ARM011 | International Academy of Viticulture and Wine Making<br>375002 Yerevan | ARMENIA |

Figure 31: Code ARM011 and respective complete contact data.



# 3 Description of search and working tools on the partner access level

Enter your username and your password to enter the partner access level.




## 3.1 *Annual update* of MCPD data in EURISCO

After the successful login you are reminded to send your MCPD data to your national inventory focal point once a year. The national inventory focal point will arrange that the MCPD data are uploaded into the EURISCO-database (http://eurisco.ecpgr.org).


By clicking on the green fleshes the window is expanded and offers the possibility to change the password.

## 3.2 The all partner access level

The search options on the **all partner access** level are the same as on the **public access** level, see pages 2 to 13and 17 to 19 of the handbook, except for the catalogue of varieties. This latter tool was made available for all users and is thus existing only once on the public level.

### 3.2.1 *SSR-marker data* are accessible only via the partner access level for partners having signed the confidentiality agreement. They were made available for public users in 2011 after the runtime of GrapeGen06**.**

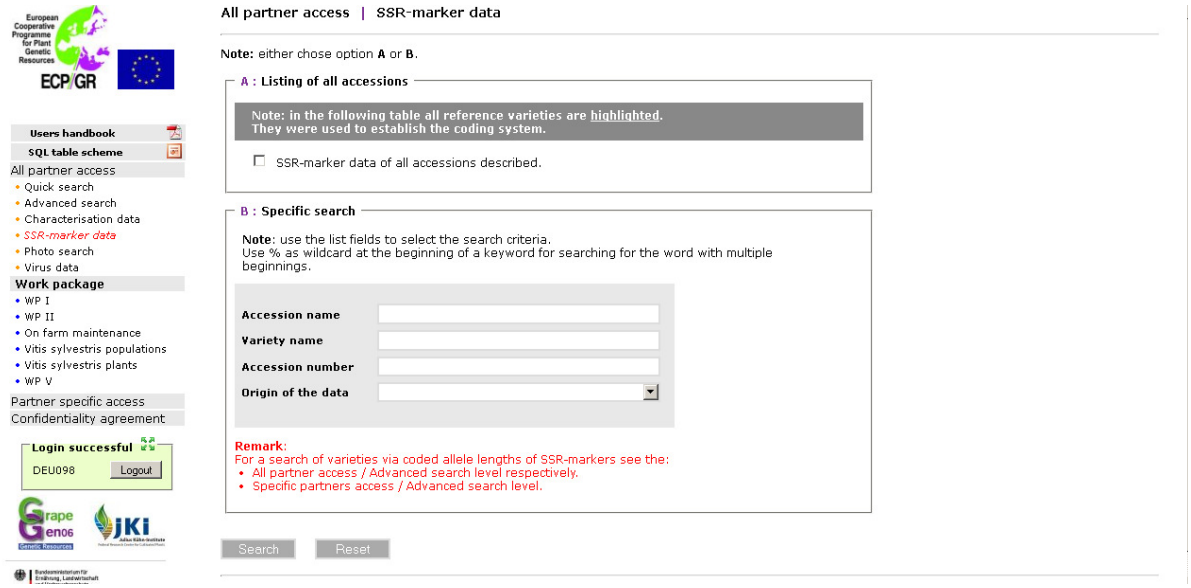
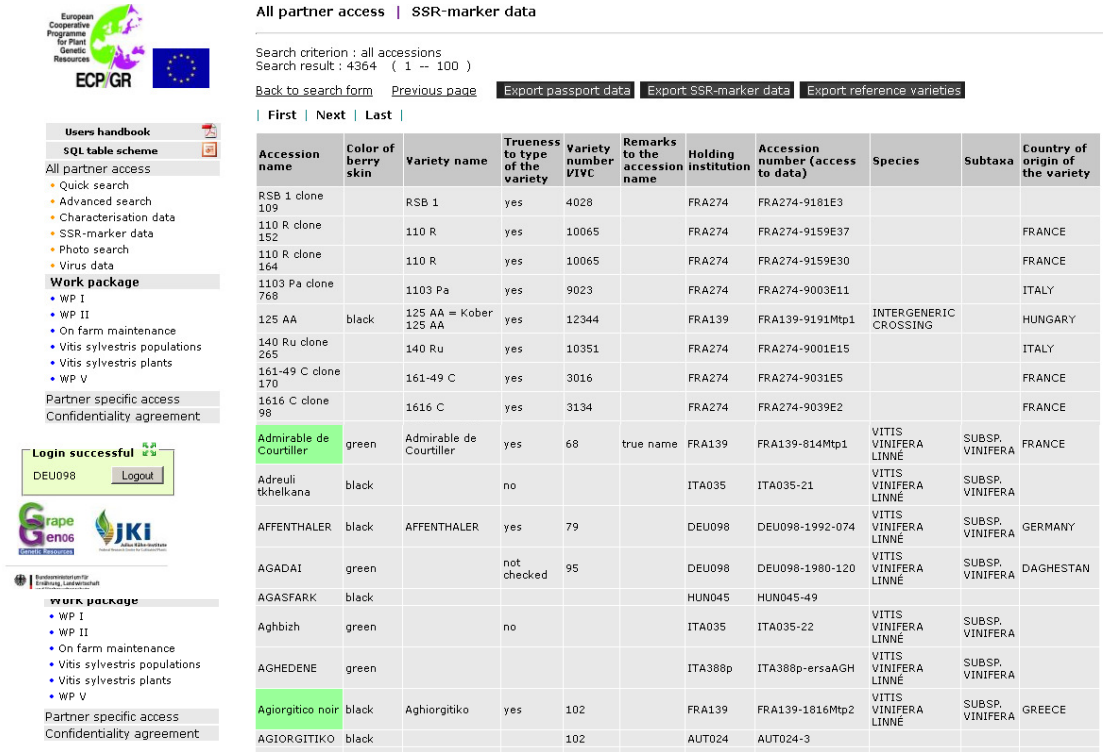



Figure 32: SSR-marker data of 4364 accessions have been uploaded until February, 2012. Reference varieties are highlighted (green color) and can be exported separately.



### 3.2.2 Access to the data of work packages I to V

GrapeGen06 consists of 7 **work packages**:
**(I)** Acquisition of SSR-marker data
**(II)** Characterisation and evaluation of old and endangered grape varieties
**(III)** On farm evaluation of agronomic features of autochthonous varieties
**(IV)** Study of *Vitis sylvestris* germplasm
**(V)** Trueness to type analysis
**(VI)** European *Vitis* Database
**(VII)** Elaboration of a long term conservation strategy.

The outcome of **work packages I** to **V** is documented separately.

In contrast to the **public access** level on the **all partner** and **partner specific access** level, the European *Vitis* Database partners have the possibility to download all registered data of MCPD, characterisation, SSR-marker analysis, virus status, on-farm maintenance and *Vitis sylvestris* populations and plants. Three examples are given: SSR-marker, on-farm management and *Vitis sylvestris* data.

Figure 33: Objective: search for and export of the characterization data of all described accessions.

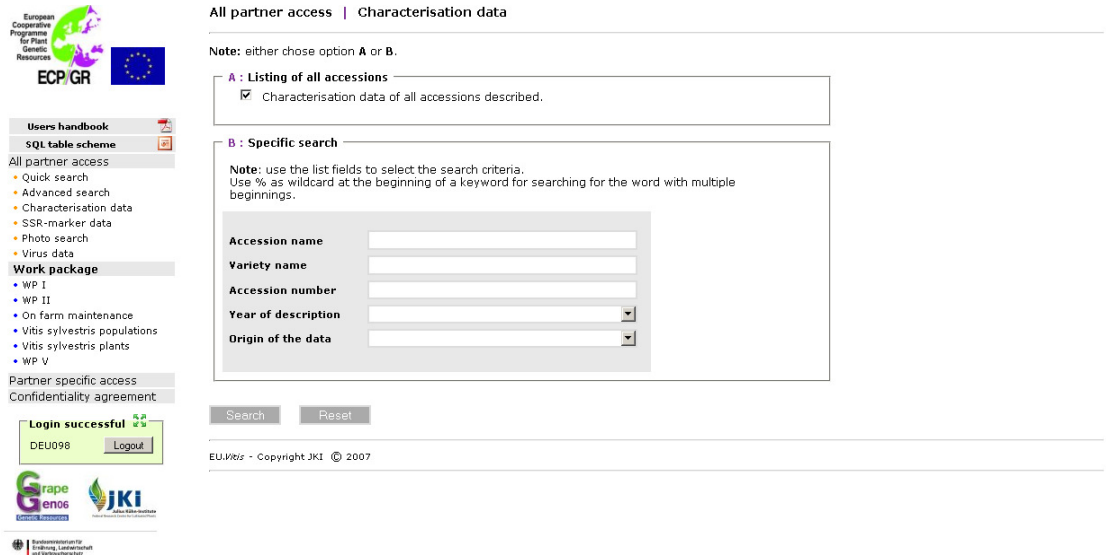



Figure 34: Search result: 2748 accessions. Export file of the characterization data is created by clicking on the corresponding button.

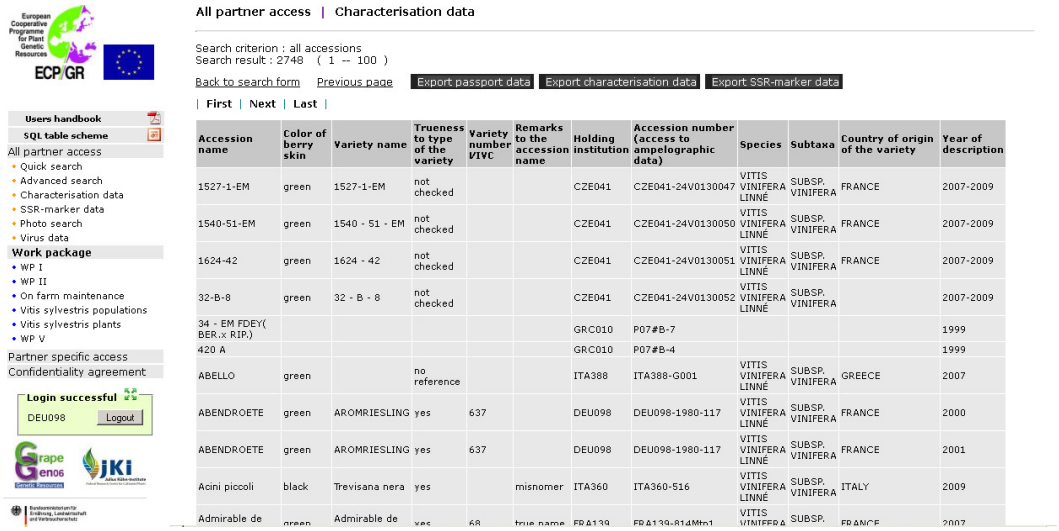


Figure 35: Excel file encompassing the characterization data of 2748 accessions.

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Export characterisation data | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | |
| 3 | Workpackag | 1-INSTCODE | 2-ACCENUM | 11-ACCENAM | A-VARIETY N | B-BERRY CO | year of desc | OIV001 | OIV003 | OIV004 | OIV006 | OIV007 | OIV008 | OIV016 |
| 1424 | WP2 | FRA139 | FRA139-0Mtp | Burdigala | Cépage non i | BLACK | 2009 | 5 | 3 | 7 | 3 | 2 | 1 | 1 |
| 1425 | WP2 | FRA139 | FRA139-0Mtp | Inconnu Cors | Cépage non i | BLACK | 2009 | 5 | 5 | 7 | 5 | 3 | 3 | 1 |
| 1426 | WP2 | FRA139 | FRA139-0Mtp | Cabernet gou | Cépage non i | BLACK | 2008 | 5 | 2 | 7 | 3 | 3 | 2 | 1 |
| 1427 | WP2 | FRA139 | FRA139-0Mtp | Cahours | Cépage non i | BLACK | 2008 | 5 | 3 | 7 | 3 | 1 | 1 | 1 |
| 1428 | WP2 | FRA139 | FRA139-0Mtp | Camaraou bla | Camaraou fer | GREEN | 2007 | 5 | 1 | 9 | 3 | 2 | 2 | 1 |
| 1429 | WP2 | FRA139 | FRA139-0Mtp | Cayam | Cépage non i | GREEN | 2008 | 5 | 1 | 9 | 3 | 3 | 3 | 1 |
| 1430 | WP2 | FRA139 | FRA139-0Mtp | Chacoli noir | Cépage non i | BLACK | 2008 | 5 | 1 | 7 | 3 | 3 | 1 | 1 |
| 1431 | WP2 | FRA139 | FRA139-0Mtp | Chasselas ro | Cépage non i | ROSE | 2008 | 5 | 5 | 5 | 5 | 3 | 3 | 1 |
| 1432 | WP2 | FRA139 | FRA139-0Mtp | Cruixen | Cépage non i | BLACK | 2008 | 5 | 5 | 7 | 3 | 1 | 1 | 1 |
| 1433 | WP2 | FRA139 | FRA139-0Mtp | Inconnu blanc | Cépage non i | GREEN | 2008 | 5 | 5 | 7 | 1 | 1 | 1 | 1 |
| 1434 | WP2 | FRA139 | FRA139-0Mtp | Inconnu Marn | Cépage non i | BLACK | 2008 | 5 | 5 | 7 | 3 | 3 | 1 | 1 |
| 1435 | WP2 | FRA139 | FRA139-0Mtp | Inconnu n°53 | Cépage non i | BLACK | 2008 | 5 | 1 | 7 | 3 | 2 | 1 | 1 |
| 1436 | WP2 | FRA139 | FRA139-0Mtp | Kniperlé préc | Cépage non i | GREEN | 2008 | 5 | 1 | 9 | 1 | 3 | 3 | 1 |
| 1437 | WP2 | FRA139 | FRA139-0Mtp | Kniperlé tardi | Cépage non i | GREEN | 2008 | 5 | 3 | 9 | 3 | 2 | 2 | 1 |
| 1438 | WP2 | FRA139 | FRA139-0Mtp | Madeleine Cé | Cépage non i | GREEN | 2009 | 5 | 3 | 5 | 5 | 2 | 1 | 1 |
| 1439 | WP2 | FRA139 | FRA139-0Mtp | Malvasia bian | Cépage non i | GREEN | 2009 | 5 | 1 | 5 | 3 | 2 | 1 | 1 |
| 1440 | WP2 | FRA139 | FRA139-0Mtp | Malvoisie de l | Cépage non i | GREEN | 2009 | 5 | 1 | 7 | 3 | 3 | 1 | 1 |
| 1441 | WP2 | FRA139 | FRA139-0Mtp | Notre dame | Cépage non i | BLACK | 2009 | 5 | 1 | 7 | 5 | 2 | 1 | 1 |
| 1442 | WP2 | FRA139 | FRA139-0Mtp | Péridac | Cépage non i | BLACK | 2009 | 5 | 1 | 5 | 5 | 3 | 2 | 1 |
| 1443 | WP2 | FRA139 | FRA139-0Mtp | Belle Denise | Cépage non i | BLACK | 2008 | 5 | 5 | 9 | 3 | 2 | 1 | 1 |
| 1444 | WP2 | FRA139 | FRA139-0Mtp | Plant Baron T | Cépage non i | BLACK | 2009 | 5 | 5 | 7 | 3 | 1 | 1 | 1 |
| 1445 | WP2 | FRA139 | FRA139-0Mtp | Plant de Brur | Cépage non i | BLACK | 2008 | 5 | 1 | 7 | 3 | 3 | 2 | 1 |

Figure 36: Search for the information gathered by description/evaluation of minor varieties maintained on-farm.

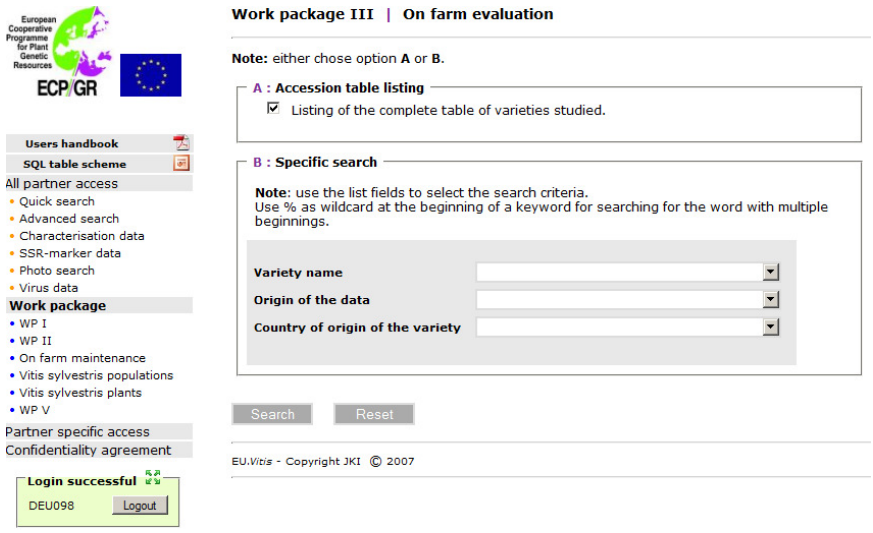



Figure 37: Data can be downloaded section-wise.

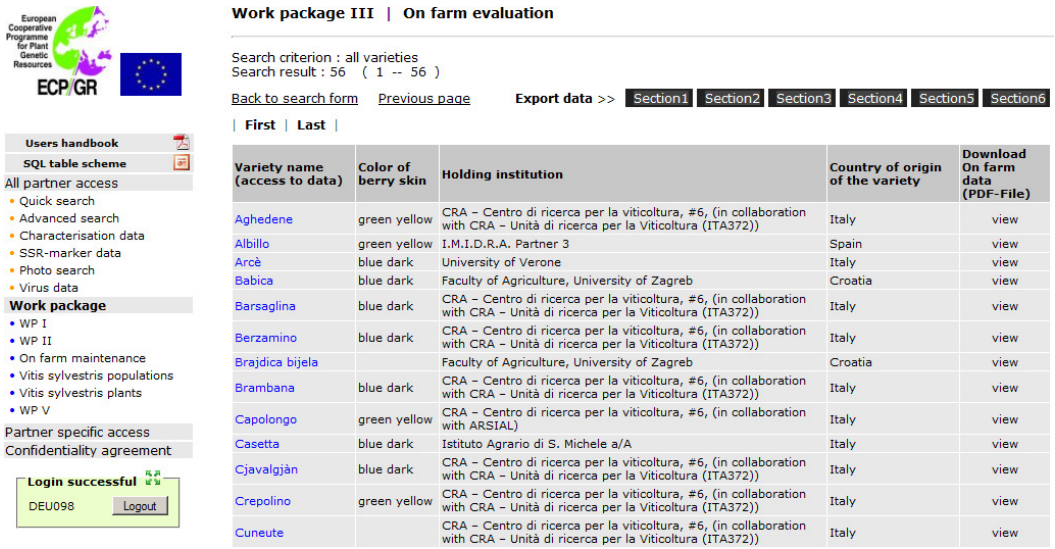


Figure 38: A listing of the *Vitis sylvestris* populations studied is to be obtained by ticking the case of option A. Specific search offers option B.

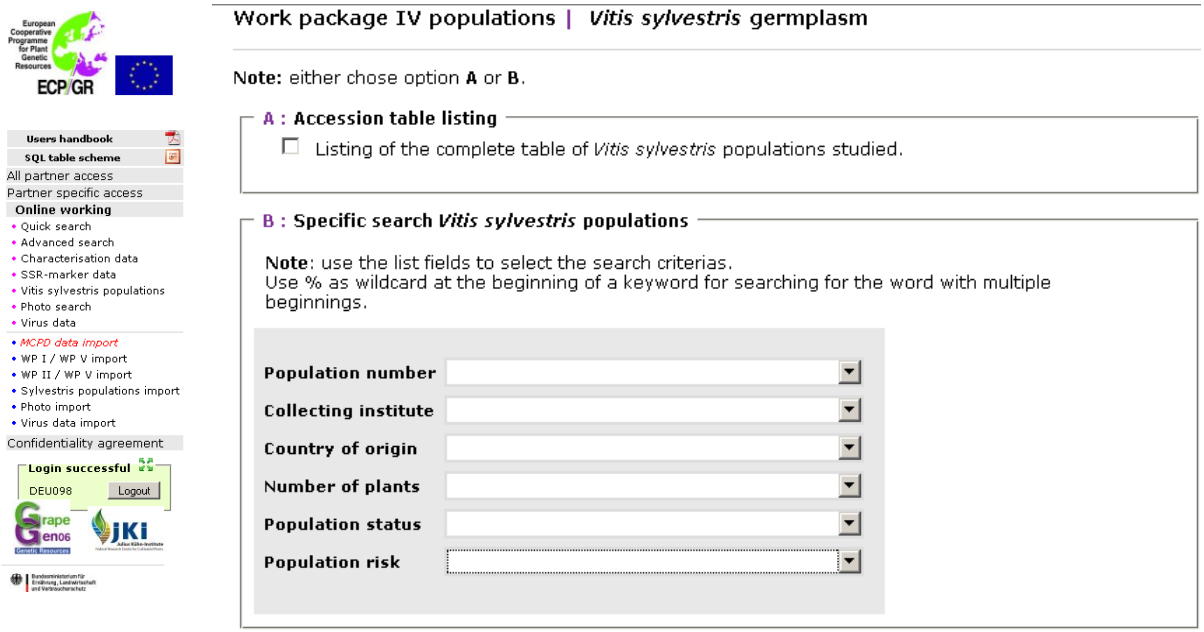
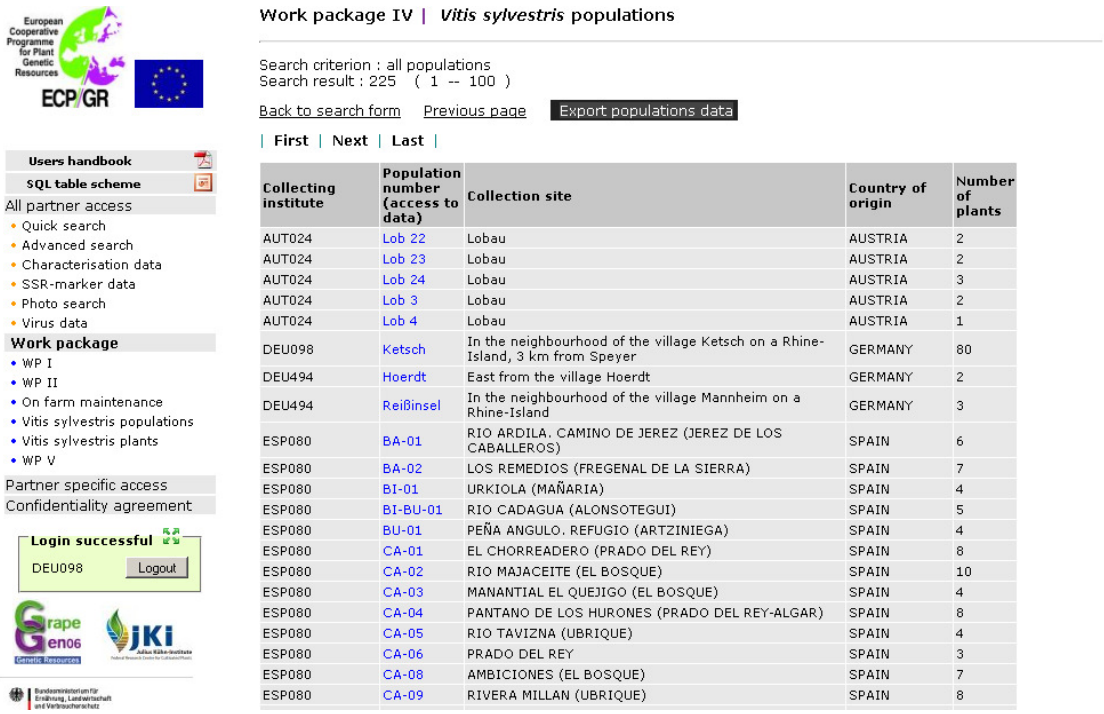



Figure 39: Clicking on the population identifier leads to the description of the *Vitis sylvestris* population site, see figure 40.




| Collecting institute | Population number (access to data) | Collection site | Country of origin | Number of plants |
|---|---|---|---|---|
| AUT024 | Lob 22 | Lobau | AUSTRIA | 2 |
| AUT024 | Lob 23 | Lobau | AUSTRIA | 2 |
| AUT024 | Lob 24 | Lobau | AUSTRIA | 3 |
| AUT024 | Lob 3 | Lobau | AUSTRIA | 2 |
| AUT024 | Lob 4 | Lobau | AUSTRIA | 1 |
| DEU098 | Ketsch | In the neighbourhood of the village Ketsch on a Rhine-Island, 3 km from Speyer | GERMANY | 80 |
| DEU494 | Hoerdt | East from the village Hoerdt | GERMANY | 2 |
| DEU494 | Reißinsel | In the neighbourhood of the village Mannheim on a Rhine-Island | GERMANY | 3 |
| ESP080 | BA-01 | RIO ARDILA. CAMINO DE JEREZ (JEREZ DE LOS CABALLEROS) | SPAIN | 6 |
| ESP080 | BA-02 | LOS REMEDIOS (FREGENAL DE LA SIERRA) | SPAIN | 7 |
| ESP080 | BI-01 | URKIOLA (MAÑARIA) | SPAIN | 4 |
| ESP080 | BI-BU-01 | RIO CADAGUA (ALONSOTEGUI) | SPAIN | 5 |
| ESP080 | BU-01 | PEÑA ANGULO. REFUGIO (ARTZINIEGA) | SPAIN | 4 |
| ESP080 | CA-01 | EL CHORREADERO (PRADO DEL REY) | SPAIN | 8 |
| ESP080 | CA-02 | RIO MAJACEITE (EL BOSQUE) | SPAIN | 10 |
| ESP080 | CA-03 | MANANTIAL EL QUEJIGO (EL BOSQUE) | SPAIN | 4 |
| ESP080 | CA-04 | PANTANO DE LOS HURONES (PRADO DEL REY-ALGAR) | SPAIN | 8 |
| ESP080 | CA-05 | RIO TAVIZNA (UBRIQUE) | SPAIN | 4 |
| ESP080 | CA-06 | PRADO DEL REY | SPAIN | 3 |
| ESP080 | CA-08 | AMBICIONES (EL BOSQUE) | SPAIN | 7 |
| ESP080 | CA-09 | RIVERA MILLAN (UBRIQUE) | SPAIN | 8 |

Figure 40: Description of the *Vitis sylvestris* population site.

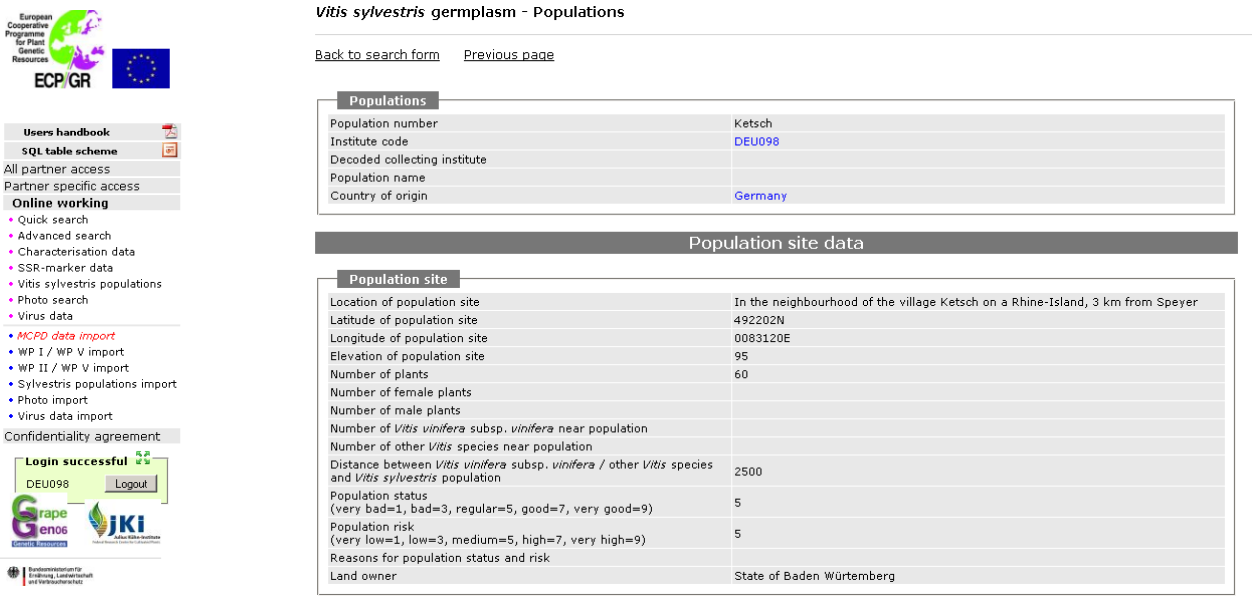



Figure 41: A listing of the *Vitis sylvestris* plants studied is to be obtained by ticking the case of option A. Specific search offers option B.

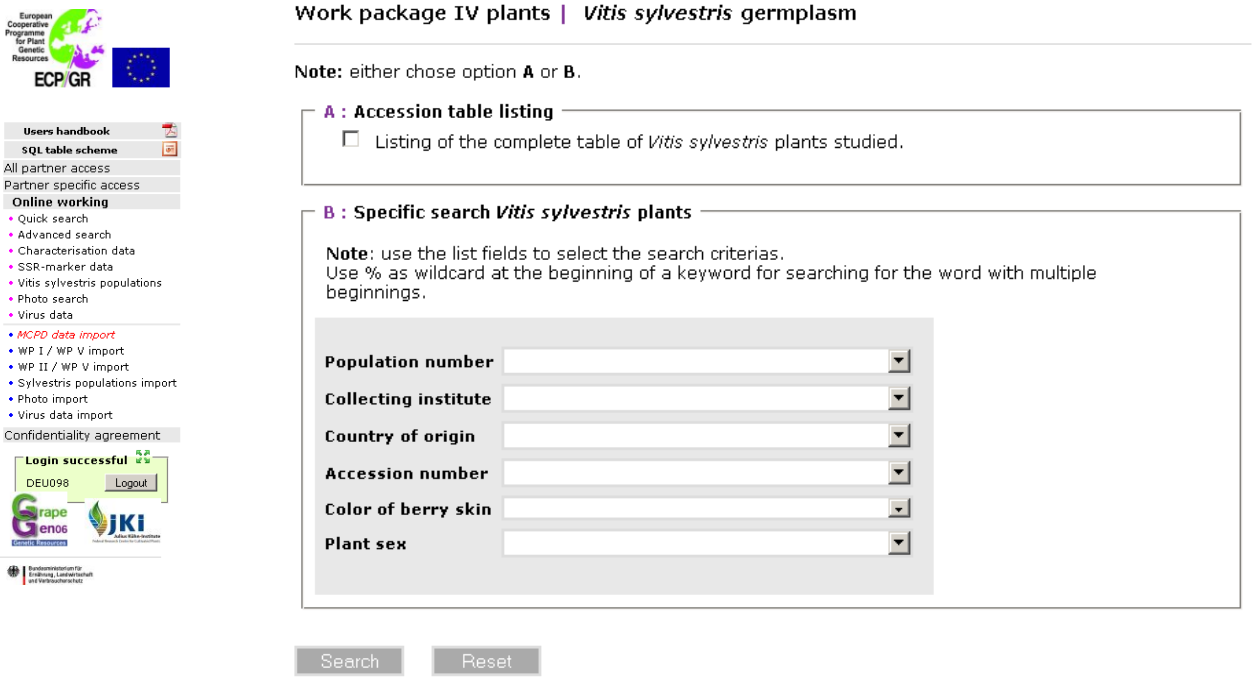
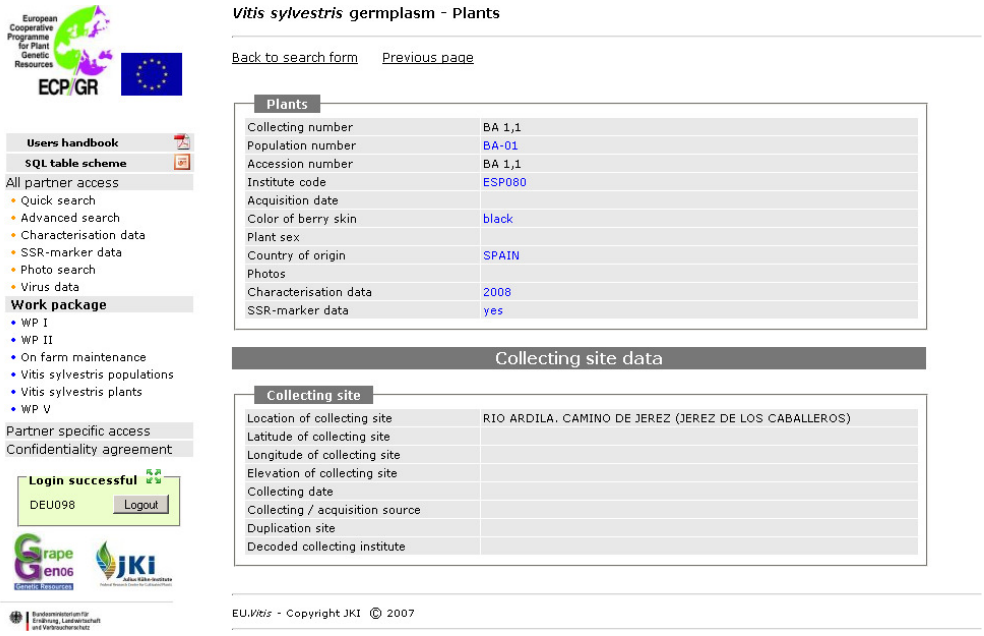


Figure 42: Listing of the *Vitis sylvestris* plants studied.


| Collecting number (access to data) | Collecting institute | Population number | Accession number | Color of berry skin | Plant sex |
|---|---|---|---|---|---|
| BA 1,1 | ESP080 | BA-01 | ESP080-BGVCAM3064 | black | |
| BA 1,6 | ESP080 | BA-01 | ESP080-BGVCAM3063 | black | |
| BA 2,1 | ESP080 | BA-02 | ESP080-BGVCAM3062 | | |
| BA 2,2 | ESP080 | BA-02 | ESP080-BGVCAM3061 | | |
| BA 2,3 | ESP080 | BA-02 | ESP080-BGVCAM3060 | black | |
| BA 2,5 | ESP080 | BA-02 | ESP080-BGVCAM3059 | | |
| BA 2,6 | ESP080 | BA-02 | ESP080-BGVCAM3058 | | |
| BI 1,1 | ESP080 | BI-01 | ESP080-BGVCAM3179 | | |
| BI 1,2 | ESP080 | BI-01 | ESP080-BGVCAM3178 | | |
| BI 1,3 | ESP080 | BI-01 | ESP080-BGVCAM3177 | black | |
| BI 1,4 | ESP080 | BI-01 | ESP080-BGVCAM3199 | black | |
| BI-BU 1,1 | ESP080 | BI-BU-01 | ESP080-BGVCAM3184 | | |
| BI-BU 1,2 | ESP080 | BI-BU-01 | ESP080-BGVCAM3183 | | |
| BI-BU 1,3 | ESP080 | BI-BU-01 | ESP080- | | |

Figure 43: Description of individual plants is to be obtained via “photos”, “characterization data,” and “SSR-marker-data”.



### 3.3 The partner specific access level

On the **partner specific access** level import of MCPD, characterisation, SSR-marker, virus and *Vitis sylvestris* population and plant data and photos is carried out.
Import of on-farm management data is carried out by the European *Vitis* Database manager.

## Attention:

MCPD data import:
The objective is to document the genotypes maintained in the partners' grapevine collections. With each upload of MCPD data (reflecting the up to date inventory of the grapevine collection) the previous MCPD data are deleted. As a consequence the complete MCPD data of your collection always has to be uploaded.

Characterization data import:
During import procedure data are overwritten if the accession number and the year of description are identical.
Data of new accessions or different years are added.

SSR-marker data and virus data import:
During import procedure data are overwritten if the accession number is identical.
Data of new accessions are added.

Photo import:
Full sized photos are to be imported. They will be used to produce the variety describing pdf-document, see figure 15. Smaller sized photos are used for overview. By zooming photographs are enlarged, provided that the original size of the photograph was uploaded.

On-line data set modification of **MCPD data** has been implemented on this level too. Addition, adjustment and deletion of entries are possible.

Guidelines with respect to the accession number
The **accession number** is the **primary key** of the European *Vitis* Database. For this reason each partner has to assign to each accession a specific number, which needs to be unique and never reused. As a consequence only MCPD-data with accession numbers are accepted for data import.

Each accession number has to start with the institute code[1] to avoid accidental multiple occurrences of the same number in different grapevine collections.

It should be independent of any accession or variety specific information to avoid subsequent changes of the accession number.

**Syntax: [your institute code-plus up to 50 characters]; Example: DEU098-2003-012.**

All accession specific information (descriptor data, photographs, SSR-marker data, virus status etc.) is linked to the **accession number**.

[1] These numbers or codes are available from http://apps3.fao.org/wiews for registered WIEWS users. From the Main Menu select: 'PGR' and 'download'. If new Institute Codes are required, they can be generated online by national WIEWS correspondents, or by the FAO WIEWS administrator [Stefano.Diulgheroff@fao.org].

### 3.3.1 Import of MCPD data

Figure 44: The back button of the browsers can not be deactivated. During data import this button needn't to be touched.


Figure 45: Search of the MCPD data excel file in your directory. Click on upload.

Figure 46: If the header contains field names which are not recognized by the program, the user is able to adjust the header by selecting the appropriate field name or to ignore the entire column.

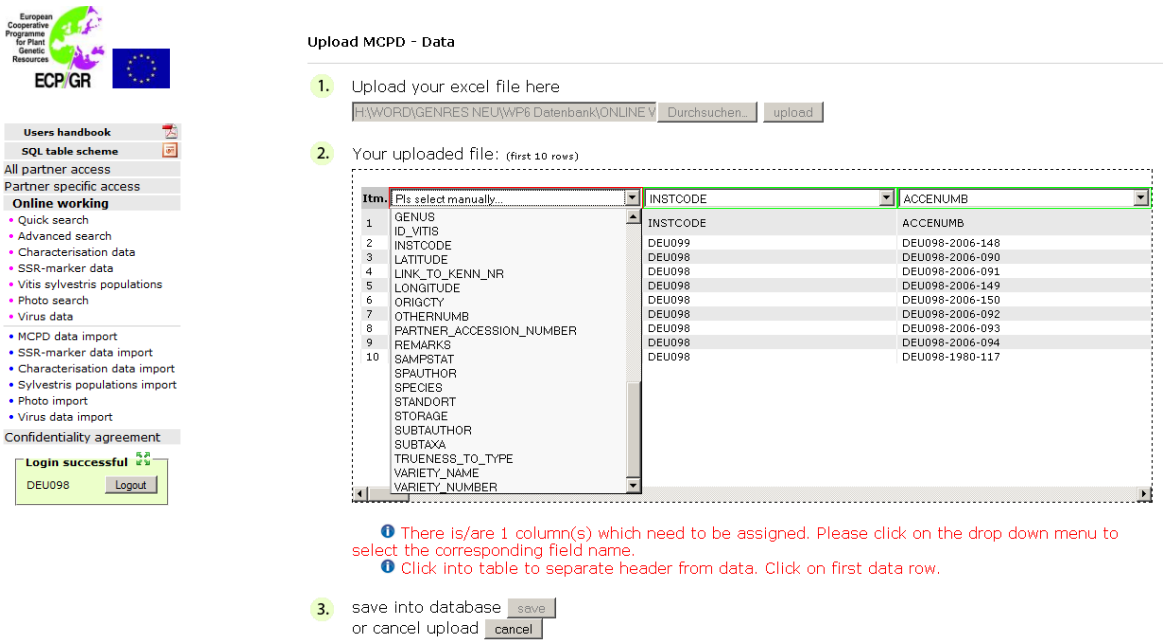



Figure 47: If all columns are correctly assigned, the user has to click on the first data row in his table.

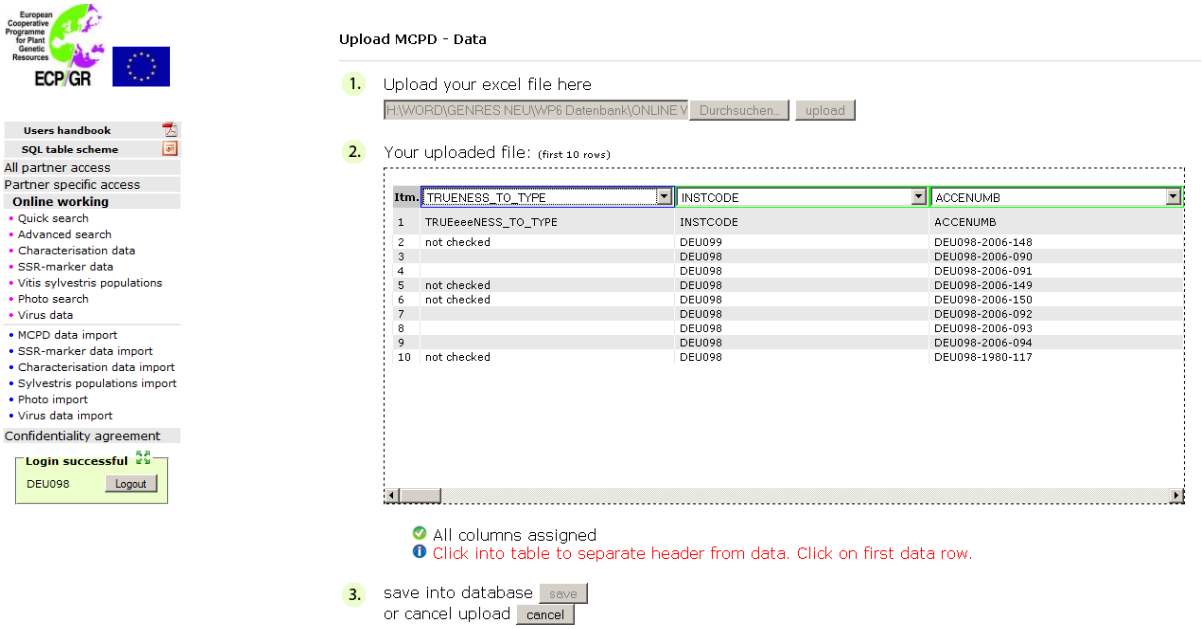
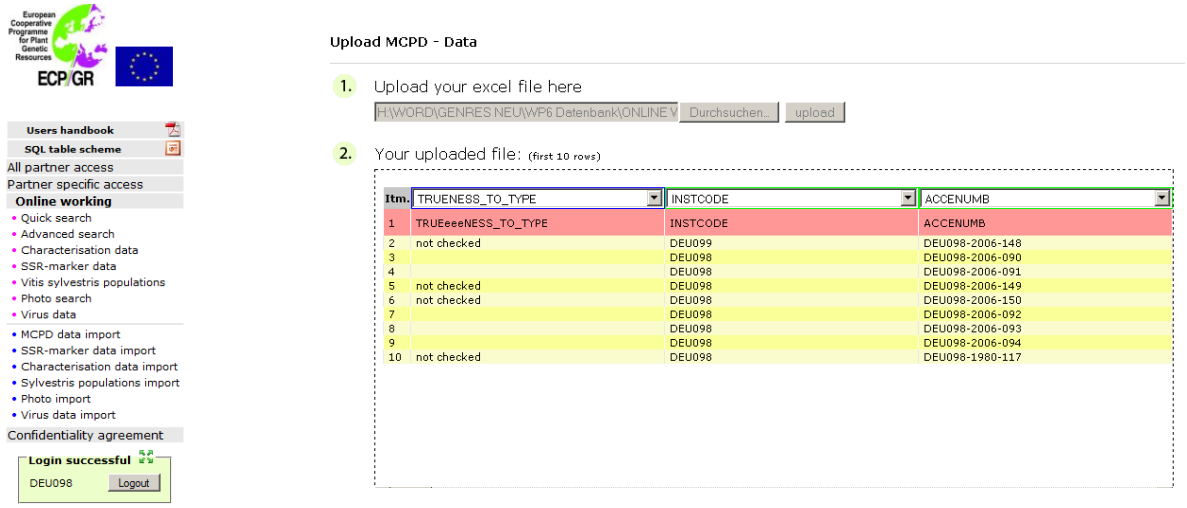


Figure 48: Different colours indicate the separation of header (red) and data rows (yellow). By clicking on “save into database” the MCPD data import starts.




The on-line import program for MCPD data will interrogate most of the criteria on consistency with predetermined expressions, because the same spelling is fundamental for retrieving identical hits. For example for the criteria like *Vitis* species, berry colour and use the same expressions have to be applied and they need to follow the same spelling. Criteria like acquisition date, year of breeding, longitude, latitude and institute codes have to meet the indicated requirements with respect to field length and field composition.

Figure 49: Interactive window ensuring the correct data import. If the same correction respectively adaptation needs to be carried out twice or more, tick the case “correct all with the same error”.

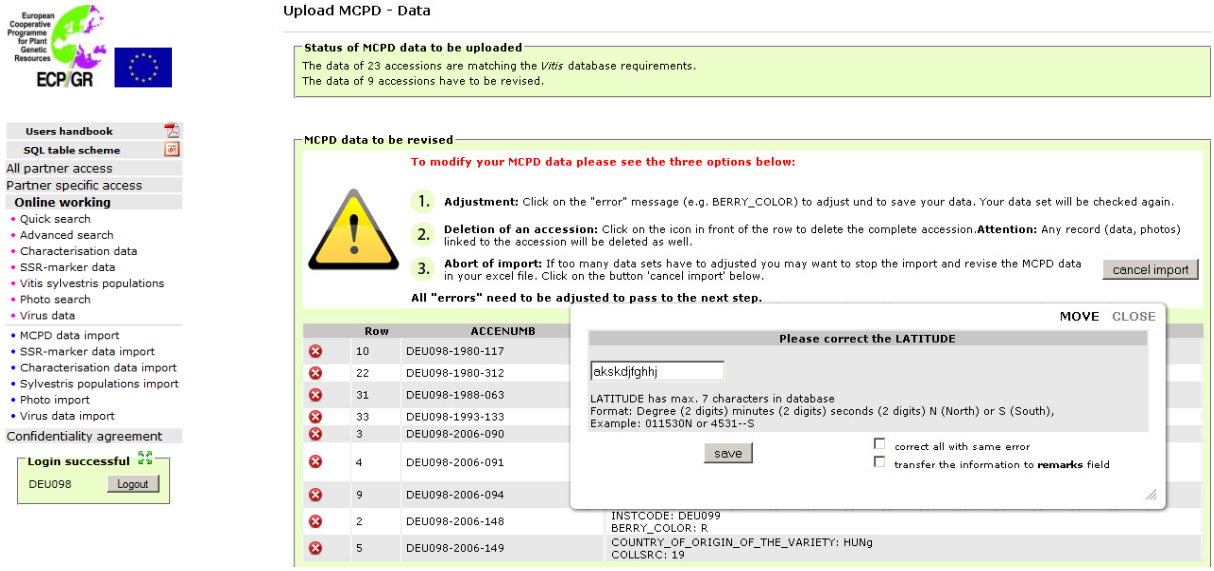
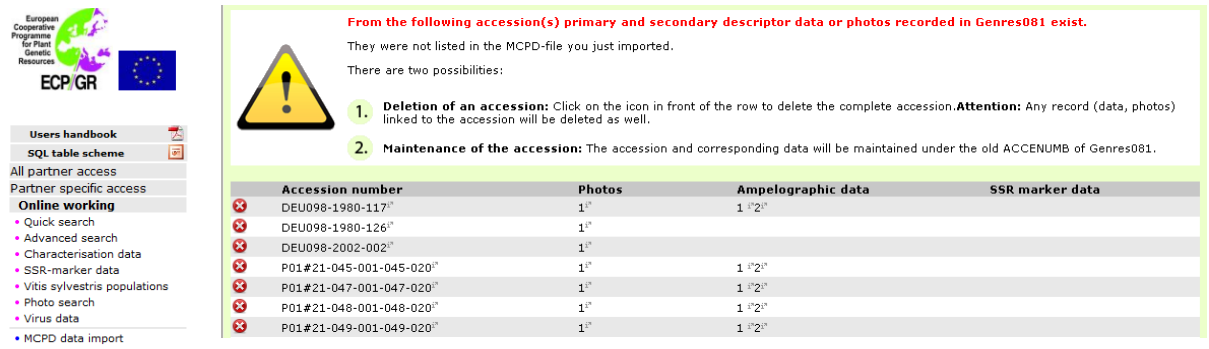


Figure 50: In case that accessions which had been described before were not listed in the MCPD data import file and the characterization data, SSR-marker data or photos are in danger to get lost, this warning message pops up. You either can delete or maintain the accession respectively check your import file.




## 3.3.2 Interactive MCPD data set modification

Figure 51: Via quick search and advanced search the partners have access to their own data only. With respect to MCPD data modifications can be carried out via “Edit record”. Single data records can be deleted as well.

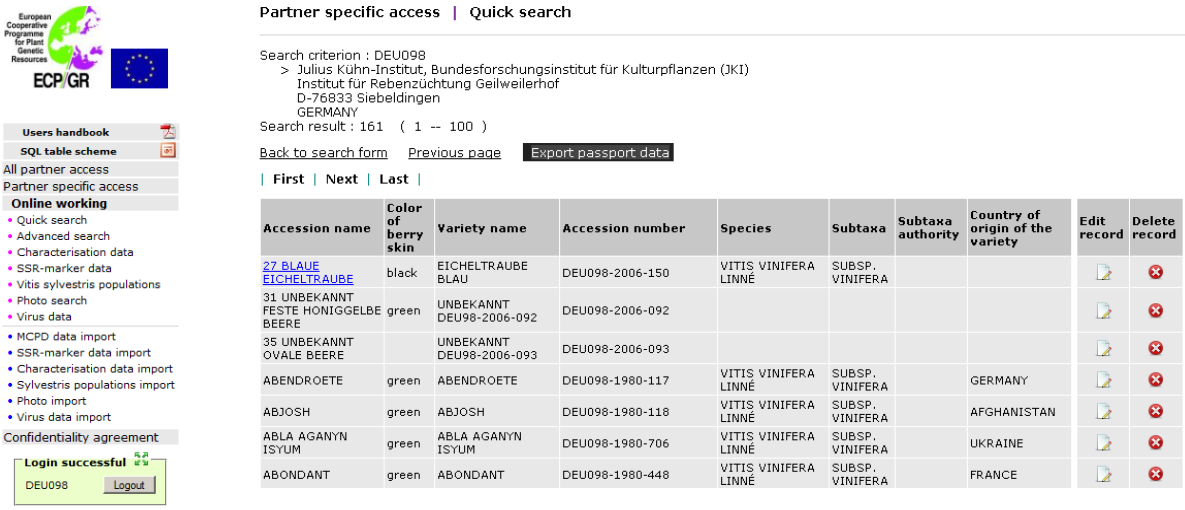
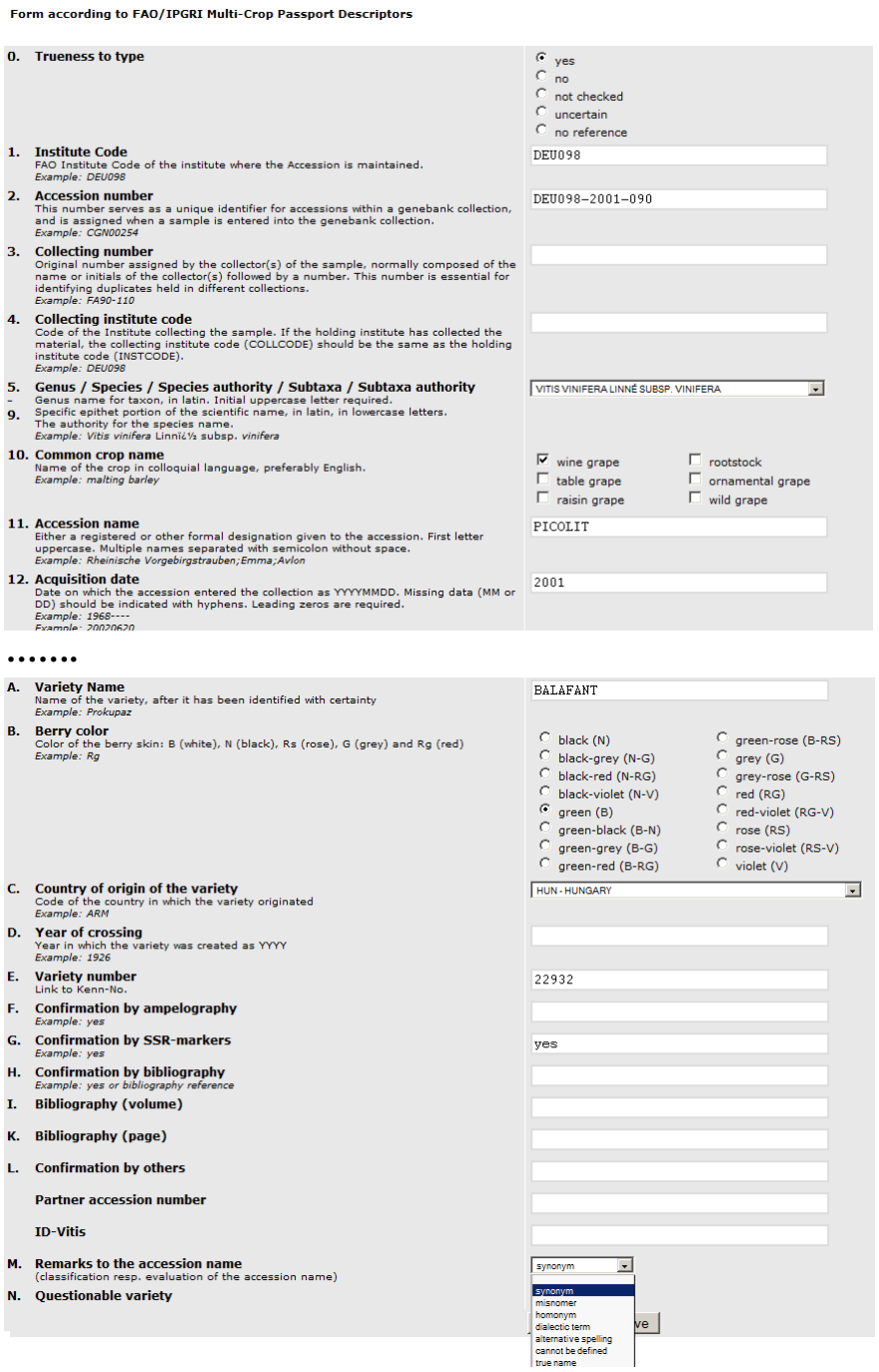


Figure 52: On-line data set processing: The first MCPDs and the *Vitis* specific criteria are to be found below.




### 3.3.3 Import of SSR-marker, characterization, virus and *Vitis sylvestris* population data

Import of the SSR-marker data, characterisation, virus and *Vitis sylvestris* population data is carried out according to figures 21 to 25.
No single data set processing is possible. Modifications (additions, deletions, changes) have to be carried out in the original excel file and then the file has to be uploaded again.
Every import replaces the previous data set of the accession. Characterisation data will be replaced if the accession number and the year of data recording are matching.

### 3.3.4 Photograph upload

For photo upload the file name has to match the required format:
accenumb_accename_category ("_additional text" is optional).jpg.
The original sized photo is uploaded. The program is creating a smaller sized photo for display on the screen and is maintaining the original size for printing.

Figure 53: Photo import module: search the photo file in your directory.

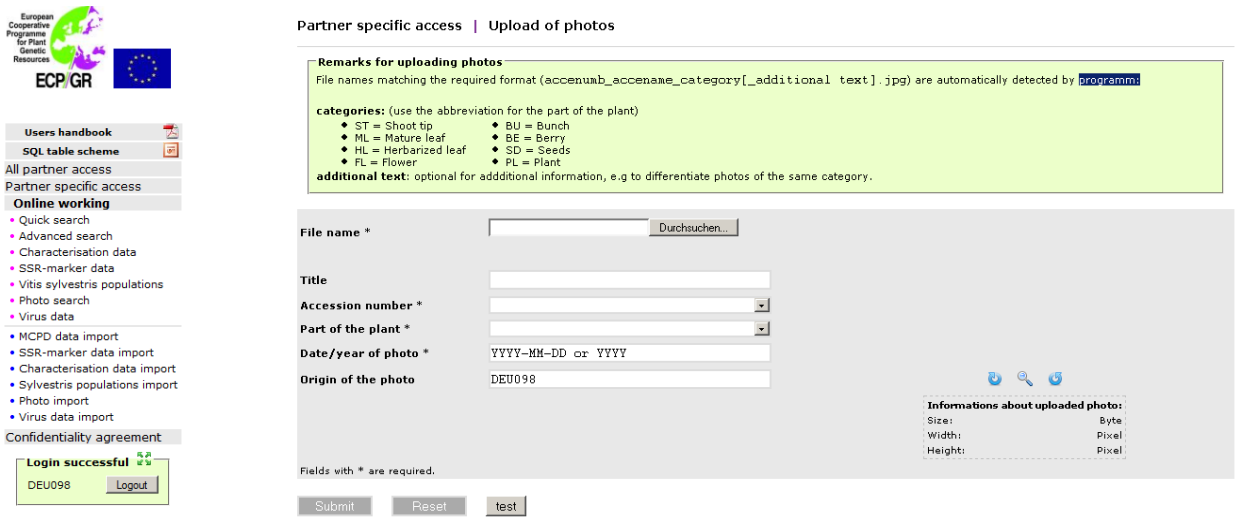
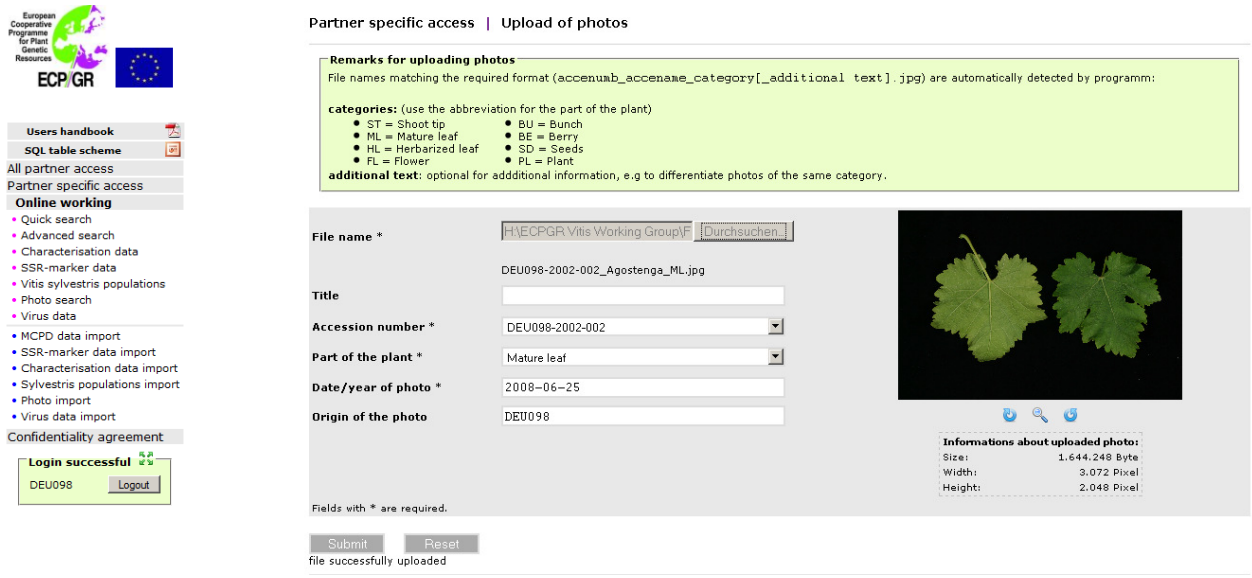



Figure 54: Via the file name of the photo, the accession number, the photo category (the year of the photo in case of digitized photos) and of course the origin of the photo are identified. By clicking on submit the photo is saved in the database.



## 3.4 Conclusion about data input, data set modification and export possibilities in the European *Vitis* Database.

| | Online-import of data by partners | Data set modification by partners | Import of the data via JKI | Export of the data by partners |
|---|---|---|---|---|
| **MCPD data** | x | x | | x |
| **Characterisation data** | x | | | x |
| **SSR-marker data** | x | | | x |
| **Virus data** | x | | | x |
| **Photos** | x | | | x |
| **On-farm evaluation** | | | x | x |
| ***Vitis sylvestris* inventory and description** | x | | | x |

## 3.5 Confidentiality agreement:

SSR-marker data obtained by the partners within this project are loaded into the database and then kept confidential.

All partners of GrapeGen09 and the new participants providing SSR-marker data signed the confidentiality agreement and have thus access to the **all partner access** level. Further participants providing SSR-marker data are welcome.

Figure 55: Access to the confidentiality agreement. The document can be downloaded. For the full text of the confidentiality agreement, see annex 1.

# 4 Conclusion

The objective was to create a European *Vitis* Database remaining active, even after termination of GrapeGen06.

Hence, besides the establishment of a tool for monitoring the long term preservation of the grapevine genetic resources, the main aim was to put into practice a "sustainable" database which is constantly maintained by the involved persons, which are the curators of grapevine collections.

Import modules for MCPD data, characterisation data, SSR-marker data, virus data, *Vitis sylvestris* population data and photos have been implemented, allowing the curators to upload and to modify their own data.

This technical innovation has the following practical consequences:
(1) Partners are responsible for their own data and
(2) It disburdens the database manager from service features.

The European *Vitis* Database is the first ECCDB database offering these forward-looking options.

After the runtime of GrapeGen06 the European *Vitis* Database will be ready to accept further partners and to include the inventories of further grapevine collections, providing the grapevine community with precious accession/variety specific information.

# 5 Varieties registered in Europe

Within GrapeGen06 a tremendous effort was made to establish a comprehensive list of the cultivars registered in European grape growing nations. This was done in the context of the Council Directive of the European Union from April 9, 1968 envisaging the creation of a "common catalogue of varieties", defined as the sum of current national catalogues "on the marketing of material for the vegetative propagation" (Lacombe et al. 2011). This European Catalogue of Nationally Registered Varieties will be continuously updated.

The following figures show the possibilities to attain corresponding information, either as prepared documents or by search lists.

Figure 56: Article published by Lacombe et al. 2011 and six annexes sorting the grapevarieties registered in Europe according to different criteria.

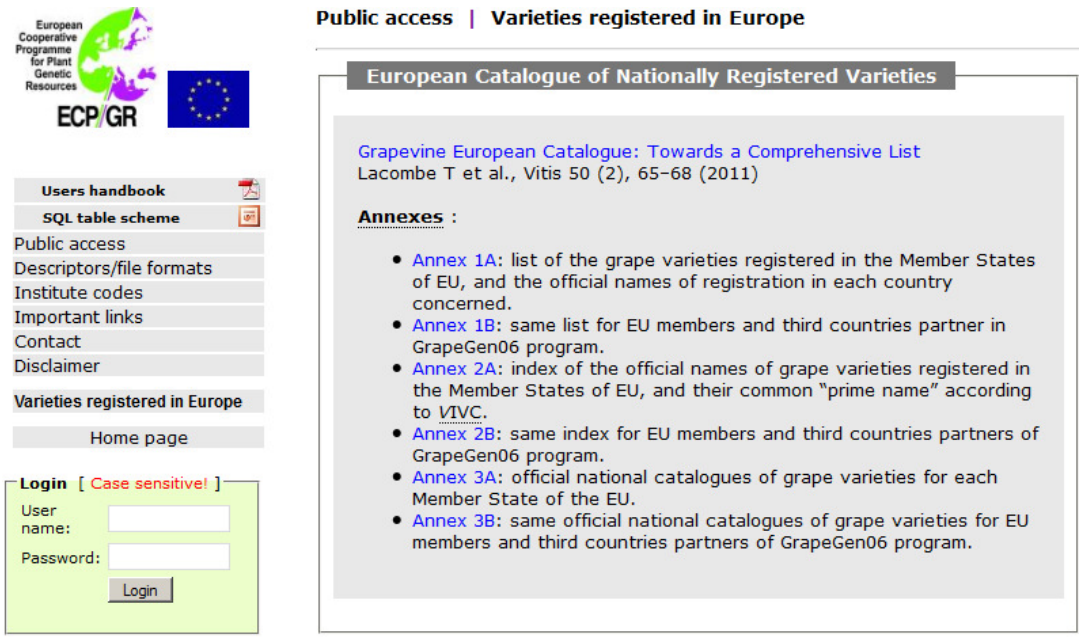


Figure 57: Using the list fields specific search options were created. For example the variety number of the *Vitis* Internatinal Variety Catalogue (VIVC) assists to find out in which country and under which name the same variety is officially registered. The variety number of "Pinot gris" in the VIVC is "9275".

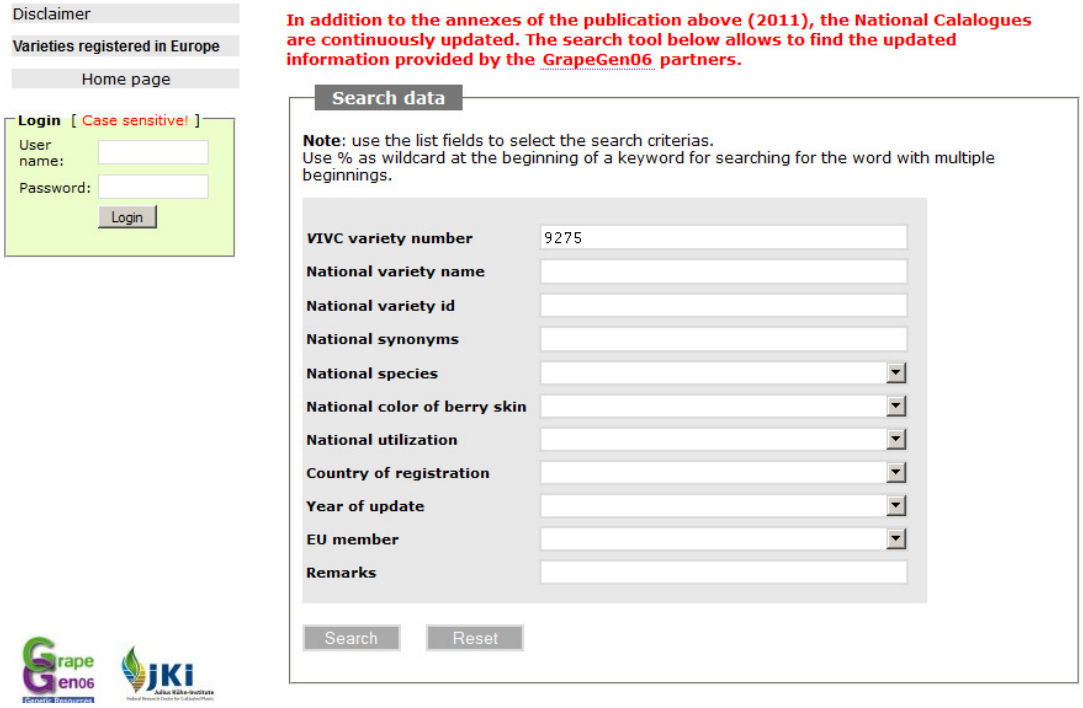



Figure 58: The table shows that via the VIVC varietiy number "9275" Pinot gris registration in European countries can be found even if the variety is officially registered under different "National variety names".

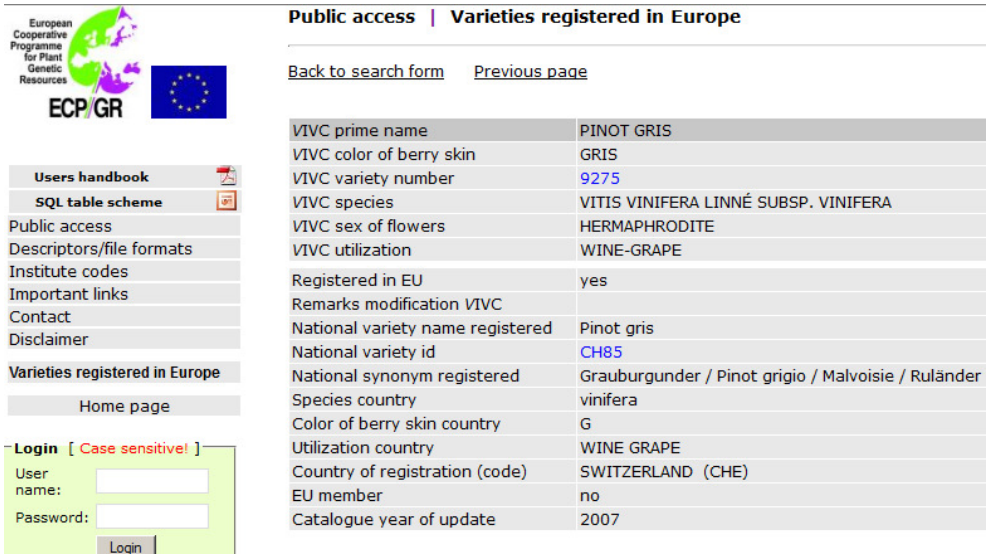

Users handbook
SQL table scheme
Public access
- Quick search
- Advanced search
- Photo search
- Characterisation data
- SSR-marker data
- Virus data
- Catalogue of varieties
- On farm maintenance

Descriptors/file formats
Institute codes
Important links
Contact
Disclaimer
Varieties registered in Europe
Home page

| First | Last |

| National variety name | National color of berry skin | National variety id | National synonyms | National species | National utilization | Year of update | EU member | VIVC prime name |
|---|---|---|---|---|---|---|---|---|
| Grauer Burgunder | | AUT38 | Pinot Gris / Ruländer | | WINE GRAPE | 2008 | yes | PINOT GRIS |
| Pino Gri / Pinot gris | GRIS | BGR099 | ???? ??? | vinifera | WINE GRAPE | 2009 | yes | PINOT GRIS |
| Pinot Grigio | NOIR | MLT43 | Pinot gris | | | 2000 | yes | PINOT GRIS |
| Pinot grigio G. | GRIS | ITA194 | Grauer Burgunder / Grauburgunder / RULANDER* / PINOT GRIS** / PINOT*** | vinifera | WINE GRAPE | 2010 | yes | PINOT GRIS |
| Pinot gris | GRIS | CH85 | Grauburgunder / Pinot grigio / Malvoisie / Ruländer | vinifera | WINE GRAPE | 2007 | no | PINOT GRIS |
| Pinot Gris | GRIS | ESP164 | | vinifera | WINE GRAPE | 2009 | yes | PINOT GRIS |
| Pinot gris | GRIS | ROM82 | | vinifera | WINE GRAPE | 2009 | yes | PINOT GRIS |
| Pinot Gris | ROUGE | PRT325 | | vinifera | WINE GRAPE | 2010 | yes | PINOT GRIS |
| Pinot gris | NOIR | MDA65 | | vinifera | WINE GRAPE | 2009 | no | PINOT GRIS |
| Pinot gris G | GRIS | BEL23 | | | | 2000 | yes | PINOT GRIS |
| Pinot gris G | GRIS | FRA231 | | vinifera | WINE GRAPE | 2010 | yes | PINOT GRIS |
| Pinot gris G | GRIS | LUX10 | | | | 2000 | yes | PINOT GRIS |
| Pinot Gris G | GRIS | NLD30 | | | | 2000 | yes | PINOT GRIS |
| Pinot sivi | GRIS | HRV146 | | vinifera | WINE GRAPE | 2009 | no | PINOT GRIS |
| Rulandské sede | BLANC | CZE69 | Pinot gris | vinifera | WINE GRAPE | 2007 | yes | PINOT GRIS |
| Rulandské šedé | BLANC | SVK29 | Klevner | | | 2000 | yes | PINOT GRIS |
| Ruländer | BLANC | GBR37 | Pinot gris | vinifera | | 2000 | yes | PINOT GRIS |
| Ruländer | GRIS | RBE518 | Grauburgunder / Grauer Burgunder / Pinot Grigio / Pinot Gris | vinifera | WINE GRAPE | 2010 | yes | PINOT GRIS |
| Ruländer G | GRIS | NLD39 | | | | 2000 | yes | PINOT GRIS |
| Sivi pinot | | SVN46 | | | | 2000 | yes | PINOT GRIS |
| Szürkebarát | BLANC | HUN054 | | | WINE GRAPE | 2010 | yes | PINOT GRIS |

Figure 59: With a click on the national variety name in the previous table a comparison of entries of the VIVC and the corresponding National Catalogue is shown.




**Additional remark:**

**Of course, the European *Vitis* Database still needs to be improved and bugs may arise. We appreciate suggestions and please inform us about any inconveniences or emerging errors.**

# 6 Annex 1

**EUROPEAN COMMISSION**
Council Regulation (EC) N°870/2004
establishing a Community programme on
genetic resources in agriculture

**AGRI GEN RES 2006**
**DECLARATION FORM**
**CONFIDENTIALITY AGREEMENT**

| | |
|---|---|
| **Proposal acronym:** | GrapeGen06 |
| **Project Duration:** | January 2007- December 2010 |

**Confidentiality Agreement for the participant**

Partner number : …….

Legal Name: ……

……

**Definition of the parties concerned:**
Database Manager: administrates the data of the partners
Data Owner: produces and supplies the data
User: partners of GrapeGen06 using other owners data

1. The database structure and software is property of the Database Managers of the Julius Kühn Institut (Zentrale Datenverarbeitung Quedlinburg and Institut für Rebenzüchtung Geilweilerhof) and constitute confidential information that the User is not allowed to copy for his own advantage, or to disclose to others, unless written agreement is given by Julius Kühn Institut.
2. Data are made available to the GrapeGen06 partners only with the objective of allowing comparison of alleles and of descriptors of cultivars and true-to-type work. Everyone is responsible for keeping private the accessions and the data and must not provide access to the data to other people outside GrapeGen06.
3. Data remain property (copyright) of the Data Owner, who exclusively decides how they can be used.
4. Data of accessions in the GrapeGen06 project of other Data Owners can be used by a User for comparison and true-to-type work, but not for publication nor for commercial use. If the User is interested to use other Owners' data for a publication, he needs to contact the Data Owner and ask for permission to use his data, in exchange of his name in the publication. He will not use the data for publication unless he has received a written consent by the data owner.
5. Access to the site is given only when a given user has submitted the requested data (see the Conclusions of the first GrapeGen06 meeting, 22 & 23 March 2007, annex 1). Exceptions can be made if a written and motivated request is made to the database manager as well as the data owner(s). The final decision is made by the data owner(s).

6. The database manager having access to all owners' data is not allowed to make use of the other owners' data. Exceptions can be made if a written and motivated request of the database manager is made to the data owner(s). The final decision is made by the data owner(s).
7. Data are produced with best diligence. They are provided "as is". They are accessible without any guarantee about their correctness, quality and approximation level.
8. Users remain responsible for the use they make of the retrieved information. JKI or the data owner cannot be held responsible for any damage resulting from an improper use of the data.

Name of person authorised to commit the organisation : .....

Function :

Date:

Authorised stamp and signature (mandatory) : .....

# 7 Annex 2: Figures 1 – 42