

SharCo

Containment of Sharka virus in view of EU-expansion

Small Collaborative project of the 7th Framework Programme

Theme 2

Food, Agriculture, Biotechnologies

WPG.2

***Prunus* cultivars with different alleles of genes
required for PPV infection**

Deliverable DG.2.2

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Workpackage concerned	WPG.2
Concerned workpackage leader	Juan-Antonio Garcia
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Deliverable report structure

1.-GENERAL PRESENTATION

Among virus diseases affecting stone fruit trees (peach, apricot, plum and related species), sharka disease is a real serious concern, being completely devastating to productivity and fruit quality. The causal agent of sharka disease is the *Plum pox potyvirus* (PPV). Breeding programs have been carried out with the aim to implement resistant cultivars (see WPG1 of SharCo) but the number of sources of resistance in stone fruit trees is rather limited (Martinez-Gomez et al., 2000; Escalettes et al., 1998). In order to diversify those sources of resistance, we recently developed a new strategy based on the use and development of recessive resistances to potyviruses.

Indeed, viruses are obligatory parasites with a relatively small genome (10 Kb long). In consequence, they rely on the host cellular machinery to complete the different steps of their cycle. The identification, in the last years, of natural recessive resistance genes against several important potyviruses in vegetable crops allowed to unravel host proteins indispensable for the virus infectious cycle; all of them are encoding the translation initiation factor eIF4E or one of its isoforms (Ruffel et al., 2002) (Nicaise et al., 2003) (Gao, Johansen et al. 2004) (Stein, Perovic et al. 2005) (Ruffel et al., 2005). More recently, we also showed that a knock-out mutant for eIF(iso)4E or for eIF(iso)4G in *Arabidopsis thaliana* is resistant to PPV (Decroocq et al., 2006; Nicaise et al., 2007). In fact, recessive resistances against viruses are likely to correspond to a passive mechanism due to the absence or to the inappropriate nature of a host factor specifically required by the virus to complete its cycle. The dominant allele can then conceptually be envisioned as encoding a susceptibility factor needed by the virus to be able to infect the host plant. It also means that inactivation of the relevant gene is likely to interfere with the virus cycle and to result in resistance. As a consequence, the identification of a plant susceptibility factor in any given Potyvirus-plant pathosystem would potentially be transferable to a number of other pathosystems and, in particular, to stone fruit trees. Because most of the *Prunus* species are susceptible to PPV, we postulate that susceptibility alleles of *eIF4E* and *eIF4G* are predominant in the *Prunus* germplasm but also some rare variants might occur. We think that those variants have not been detected yet because either this germplasm has not been tested for resistance to PPV or it exists in an heterozygous state. In the task TG2.1 of SharCo, we proposed to search for those rare variants, departing from the susceptibility alleles and potentially bearing resistance to PPV.

2.- DETAILED DESCRIPTION

DG2.2 deliverable is focusing on i) the detection of polymorphism in the *eIF4E* gene and isoform (*eIFiso4E*) in plant material originating from different regions of the world, ii) the comparison of genetic diversity at each locus, iii) the identification of rare alleles departing from the susceptibility alleles and, finally, iv) the correlation between natural polymorphisms and resistance to sharka disease.

Allelic variation corresponds either to Single Nucleotide Polymorphism (SNP), small insertions or deletions. To survey variation in *eIF4E* genes, we used the publicly available, live reference *Prunus* collections in Davis (ARS-USDA, USA), Bordeaux and Avignon (INRA, Centre de Ressources Génétiques, France), Lednice (MUAFF, Czech republic), Malatya (Inonu University, Turkey), Bakou and Naxçivan (AGRI, Azerbaijan), Xiongyue and Nanjing (China). Major *Prunus* crop species are indeed originating either from Central Asia or Caucasia, followed by domestication and breeding all over Asia and Europe. Therefore, sampling in the native and wild *Prunus* germplasm was also performed in order to compare with the current breeding material.

Although a variety of methods is available for *de novo* single nucleotide polymorphism (SNP) discovery, DNA sequencing is the method of choice for screening studies in heterozygous individuals and allogamous species. Except in *P. persica*, most of the *Prunus* species are allogamous preferentially or strictly and the recessive resistance phenotype cannot be detected. In some species (*P. armeniaca* -Apricot- for example), no homozygous PPV susceptible control DNA is available, most of the individuals are heterozygous and therefore the detection of heteroduplex is useless. The live reference collections of *Prunus* sp. cited above were used in this study to survey variation in eukaryotic translation initiation factors among individuals from, in priority, *P. persica* (peach), *P. dulcis* (almond), *P. armeniaca* (apricot) and diploid plums (*P. cerasifera*). Other related or unrelated wild species were added in the survey and used as outgroups. A list of the 1,035 accessions surveyed in this task is available in the annex of DG2.2, together with their origin. Samples from wild *Prunus* populations originating from different Central Asian provinces and neighboring countries were added. Both are indeed a material of choice for diversity since they correspond to regions of origin or diversification of those species.

Candidate gene sequencing was performed with gene- and copy-specific primers on 5 to 200 genetically diverse individuals per *Prunus* species to reveal SNP and indels. Since the size of the genomic clones can be rather large (>3 Kb for *eIF4E*), we focused on the full-length coding regions of the *eIF4E* and *eIFiso4E* genes (~ 650 bp). Sequences were compared to fully susceptible cultivars like 'GF305' in peach, 'Currot' in apricot, 'Aï' in almond. A

bioinformatics pipeline was set up in order to analyze such sequence data, using Genalys or Phred-Phrap-Polyphred and consed, then alignment through BioEdit, polymorphism analysis with DNAsp and phylogeny with Mega4 software. Point mutation and indels (deletion, insertion, mis-splicing of introns) are then sorted out and verified by resequencing of the candidate individual.

3. ACTUAL ACHIEVEMENTS

1,035 individuals were surveyed among which 274 peach, 445 apricot, 138 almond, 69 plum, 109 cherry trees (Table 1). The remaining individuals analysed are peach-, apricot, plum- and cherry-related, wild and/or ornamental species (see annex DG2.2).

Geographical origin	Collection/Prospection	Prunus subspecies					Total
		Persica (Peach)	Armeniaca (Apricot)	Amygdalus (Almond)	(Prunus) Plum	Cerasus (Cherry)	
Bordeaux (France)	Collection	70	-	-	-	47	117
Avignon France)	Collection	23	15	24	31	1	94
Azerbaïdjan	Collection/Prospection	25	48	15	27	28	143
China	Collection/Prospection	77	28	-	2	5	112
Czech Republic	Collection	26	142	2	-	-	170
Turkey	Collection/Prospection	-	77	42	-	14	133
Ukrainia	Collection	-	95	-	-	-	95
USA	Collection	48	38	55	9	14	164
South Africa	Prospection	5	2	-	-	-	7
Total		274	445	138	69	109	1035

Table 1: Repartition of the *Prunus* subspecies in the different collection analyzed

The current achievements are as follows:

a) The *eIF4E* and *eIFiso4E* loci display polymorphism and genetic variability within and among the *Prunus* species depending on their geographical origin.

	<i>eIF4E</i> gene			<i>eIF(iso)4E</i> gene		
	number of sequences	number of mutated sequences	number of haplotypes	number of sequences	number of mutated sequences	number of haplotypes
Persica (Peach)	211	29	19	185	18	12
Armeniaca (Apricot)	227	87	57	275	205	72
Amygdalus (Almond)	63	45	35	74	69	47
Diploid Plum	44	40	21	55	47	33
Cerasus (Cherry)	59	57	41	58	57	39
Total - %	604	258 – 42.7%	173 – 28.6%	647	396 – 61.2%	203 – 31.3%

Table 2: Occurrence of *eIF4E* and *eIFiso4E* alleles diverging from the susceptible ones within various *Prunus* crop species. Number of sequences: number of individuals tested per specie; number of mutated sequence: number of nucleotide sequences showing

nucleotide substitutions or small indels within the coding region, in comparison with the susceptible reference alleles. They are depicted as number of haplotypes (= number of rare alleles), which correspond to the number of unique sequences of the *eIF4E* and *eIFiso4E* genes diverging from the susceptible reference sequences.

Data also shows a higher diversity at the **eIF(iso)4E locus (31.3%) compared to eIF4E (28.6%)** (Table 2) but also the predominance of rare alleles in materials originating from Asia and Mid-Asia (Tricon et al., 2010). This was not so surprising since the origin of the Prunoideae (*Prunus* species) is the ancient Asia continent, followed by a domestication basin in China, Middle-East and Central Caucasia. This work was accordingly intensified through a PHC PFCC bilateral project (France-China), by performing similar allelic sequencing on a larger number of original Central Asian *Prunus* genetic resources.

b) Some *Prunus* cultivars bear non-synonymous mutations in the *eIF4E* or *eIFiso4E* genes.

Since the dominant susceptible allele is encoding a host protein factor needed by the virus, any mutation at the protein level within the susceptibility gene might potentially lead to the inactivation of the plant/virus interaction and result in the resistance to virus infection. As a consequence, we are targeting non-synonymous mutations occurring in the coding region of the *eIF4E* and *eIFiso4E* genes. For this purpose, nucleotide sequences were translated using the BioEdit software and align with the PPV susceptible protein sequences.

	eIF4E gene			eIF(iso)4E gene		
	number of sequence	number of mutated sequence	number of haplotype	number of sequence	number of mutated sequence	number of haplotype
Persica (Peach)	211	21	12	185	7	6
Armeniaca (Apricot)	227	47	33	275	29	14
Amygdalus (Almond)	63	32	22	74	69	17
(Prunus) Plum	44	39	12	55	17	12
Cerasus (Cherry)	59	57	30	58	50	17
Total	604	196 – 32.4%	109 – 18.0%	647	172 – 26.5%	66 – 10.2%

Table 3: *Prunus* individuals diverging from the susceptible ones at the protein level.

At the protein level, data show higher diversity among mutated sequences for *eIF4E* gene (32.4%) compared to *eIF(iso)4E* gene (26.5%). In the case of *eIF(iso)4E*, we also noticed that several mutations are synonymous and are not conferring modifications at the amino acid level.



Figure 1a: Neighbour joining tree at the amino-acid level for *eIF4E* gene

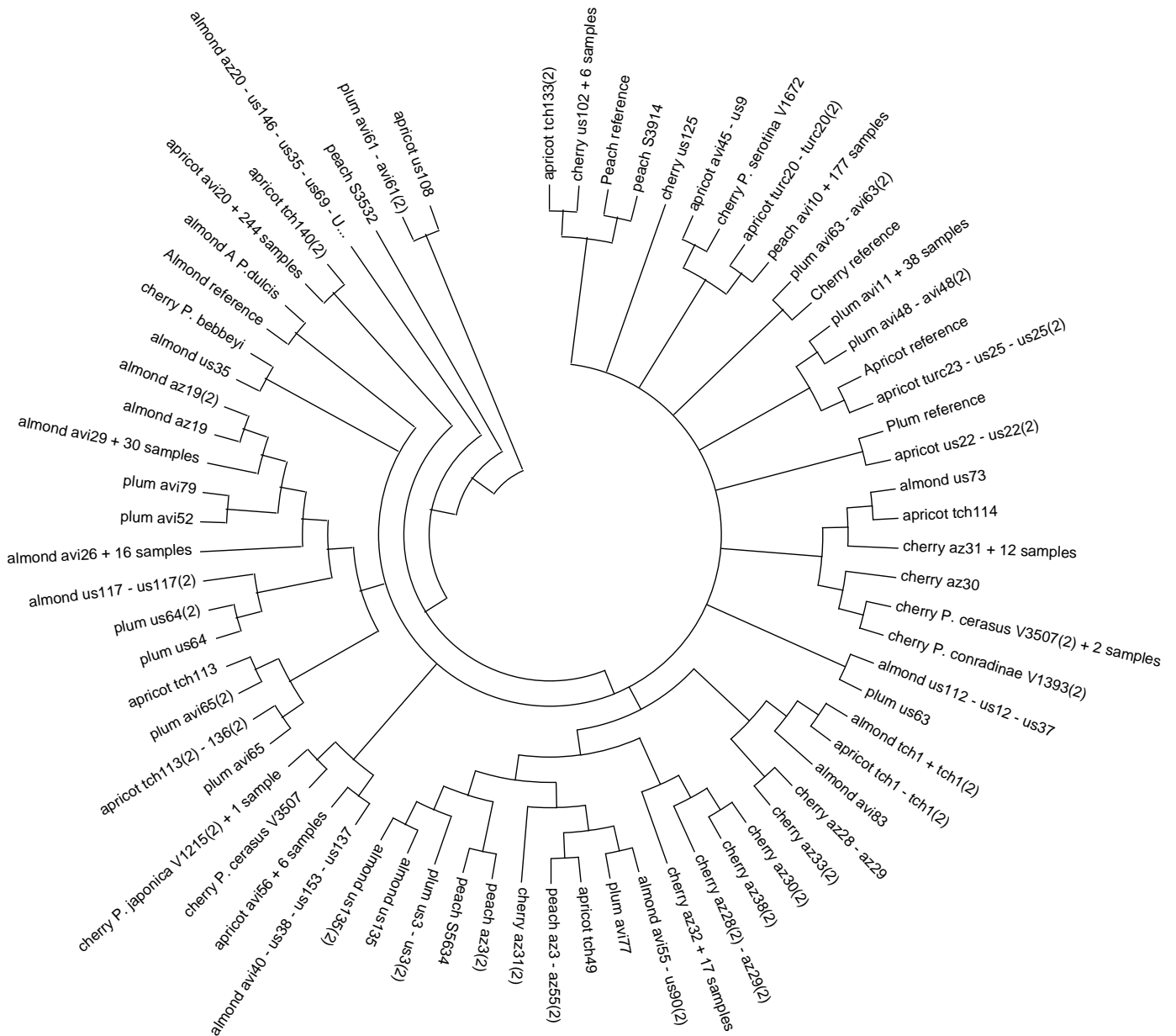


Figure 1b: Neighbour joining tree at the amino-acid level for the *eIFiso4E* gene

c) Several *Prunus* cultivars display rare mutations in the plant/virus interaction domains or in amino acid sites affecting the stability of the eIF4E or eIFiso4E protein.

Viral proteins (VPg, CI, P1) were shown to interact specifically with two distinct amino acid domains of the eIF4E or eIFiso4E proteins (Robaglia and Caranta, 2006). Those domains are named domain 1 and domain 2, accordingly. Moreover, any mutation affecting the stability of the host protein or its folding would eventually lead to impaired interaction between viral proteins and translation initiation complex. Therefore, we are targeting non-synonymous mutations within the eIF4E or eIFiso4E coding sequence, affecting either one of

the two interaction domains or the stability of the host protein. To predict the effect of the mutation on the protein conformation, we used the Polyphen software (<http://genetics.bwh.harvard.edu/pph/index.html>). Mutations within the interaction domains were located manually. Nevertheless, we were able to single out several *Prunus* individuals displaying relevant amino acid mutations (see Table 4 and Figures 2a, 2b), those are our prime candidates for resistance to sharka disease.

Prunus	Sample	Origin	Mutation in interaction domain		Mutation affecting stability of the protein	
			eIF(iso)4E	eIF4E	eIF(iso)4E	eIF4E
Almond	avi55	Israël			x	
Almond	az1	Azerbaïdjan				x
Almond	az10	Azerbaïdjan				x
Almond	az19	Azerbaïdjan			x	
Almond	us127	unknown				x
Almond	us135	Kazakhstan	x			x
Almond	us73	Kazakhstan	x			x
Almond	us90	Turkmenistan			x	
Almond	us98	Turkmenistan				x
Apricot	tch1	Ukraine			x	
Apricot	tch114	unknown	x			
Apricot	tch133	unknown			x	
Apricot	tch140	unknown		x		
Apricot	tch64	unknown				x
Apricot	tch67	Hungary				x
Apricot	tch98	unknown				x
Apricot	turc20	unknown			x	
Apricot	turc23	unknown			x	
Apricot	us108	Japan	x		x	x
Apricot	us25	Pakistani			x	
Cherry	az27	Azerbaïdjan				x
Cherry	az28	Azerbaïdjan				x
Cherry	az29	Azerbaïdjan				x
Cherry	az30	Azerbaïdjan				x
Cherry	az31	Azerbaïdjan				x
Cherry	az32	Azerbaïdjan				x
Cherry	az34	Azerbaïdjan				x
Cherry	az36	Azerbaïdjan				x
Cherry	az37	Azerbaïdjan				x
Cherry	az38	Azerbaïdjan				x
Cherry	az50	Azerbaïdjan				x
Cherry	az54	Azerbaïdjan				x
Cherry	P.bebbeyi	unknown			x	
Cherry	us107	usa				x
Cherry	us125	Japan				x
Cherry	us72	usa		x		x
Cherry	V0370	unknown				x
Cherry	V1244	unknown				x
Cherry	V3507	unknown				x
Peach	az3	Azerbaïdjan	x		x	
Peach	az55	Azerbaïdjan			x	
Peach	Cadaman	unknown				x
Peach	s3914	unknown			x	
Peach	s5634	unknown	x		x	
Plum	avi14	unknown				x
Plum	avi48	unknown			x	
Plum	avi63	unknown				x
Plum	avi66	unknown				x
Plum	avi67	unknown				x
Plum	avi77	unknown			x	
Plum	avi81	unknown				x
Plum	az59	Azerbaïdjan				x
Plum	us3	usa	x			
Plum	us64	usa			x	

Table 4: *Prunus* individuals showing amino-acid modifications affecting either the interaction domains or the stability of the eIF4E or eIFiso4E proteins.

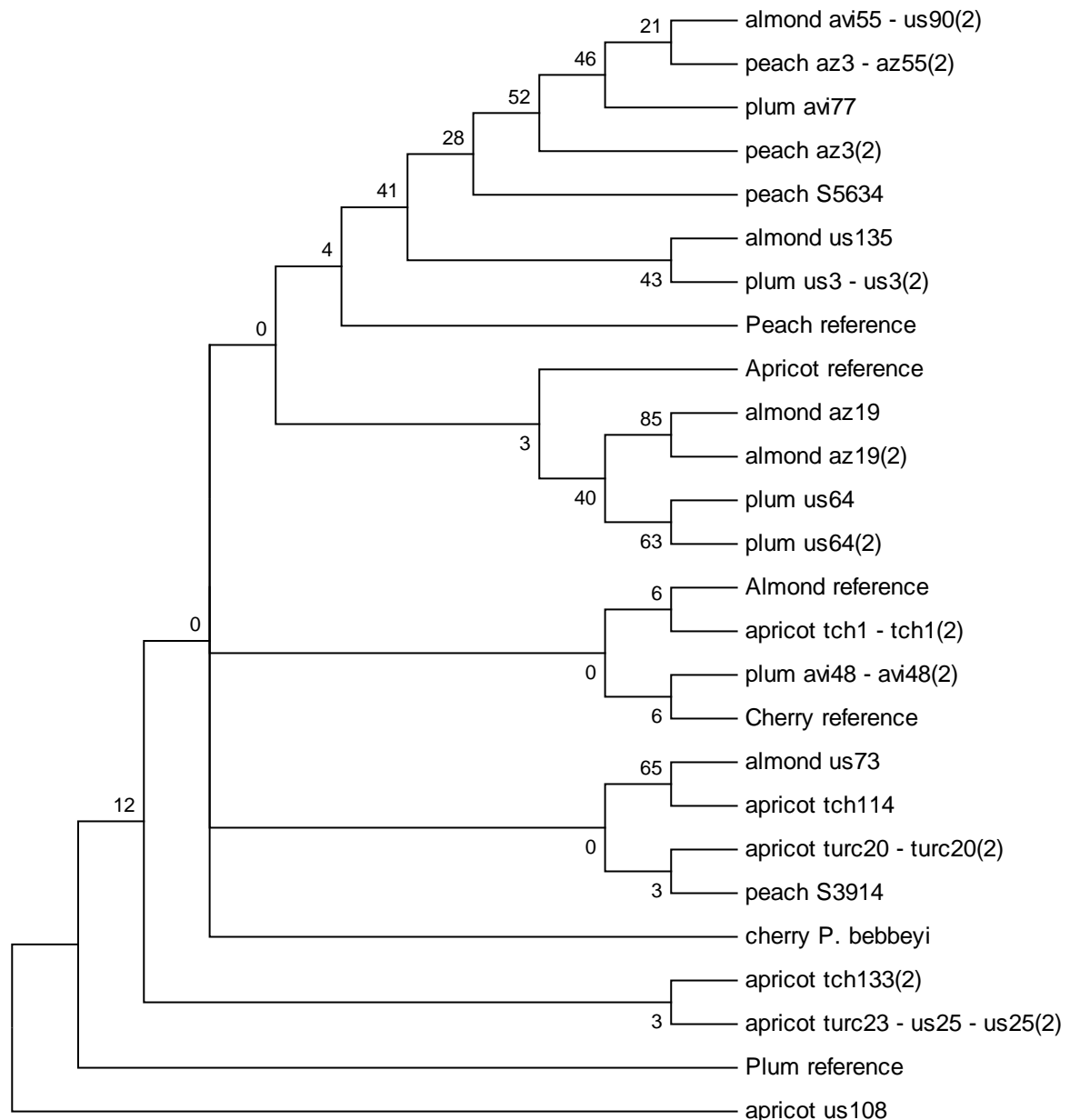


Figure 2a: Example of neighbour joining tree obtained from the eIF(iso)4E protein mutated in the interaction domains and/or affected in the stability of the protein. The reference PPV susceptible amino acid sequences were added in comparison and named ‘apricot reference’, ‘almond reference’, ‘peach reference’, ‘plum reference’ etc... The fact that the mutated *Prunus* cultivars are no longer grouping with its species reference sequence demonstrates that those rare mutations affecting either the interaction domains or the stability are occurring randomly and independently of the species. The pattern of polymorphism may be explained by the selection pressure acting on this type of proteins involved in the cellular machinery.

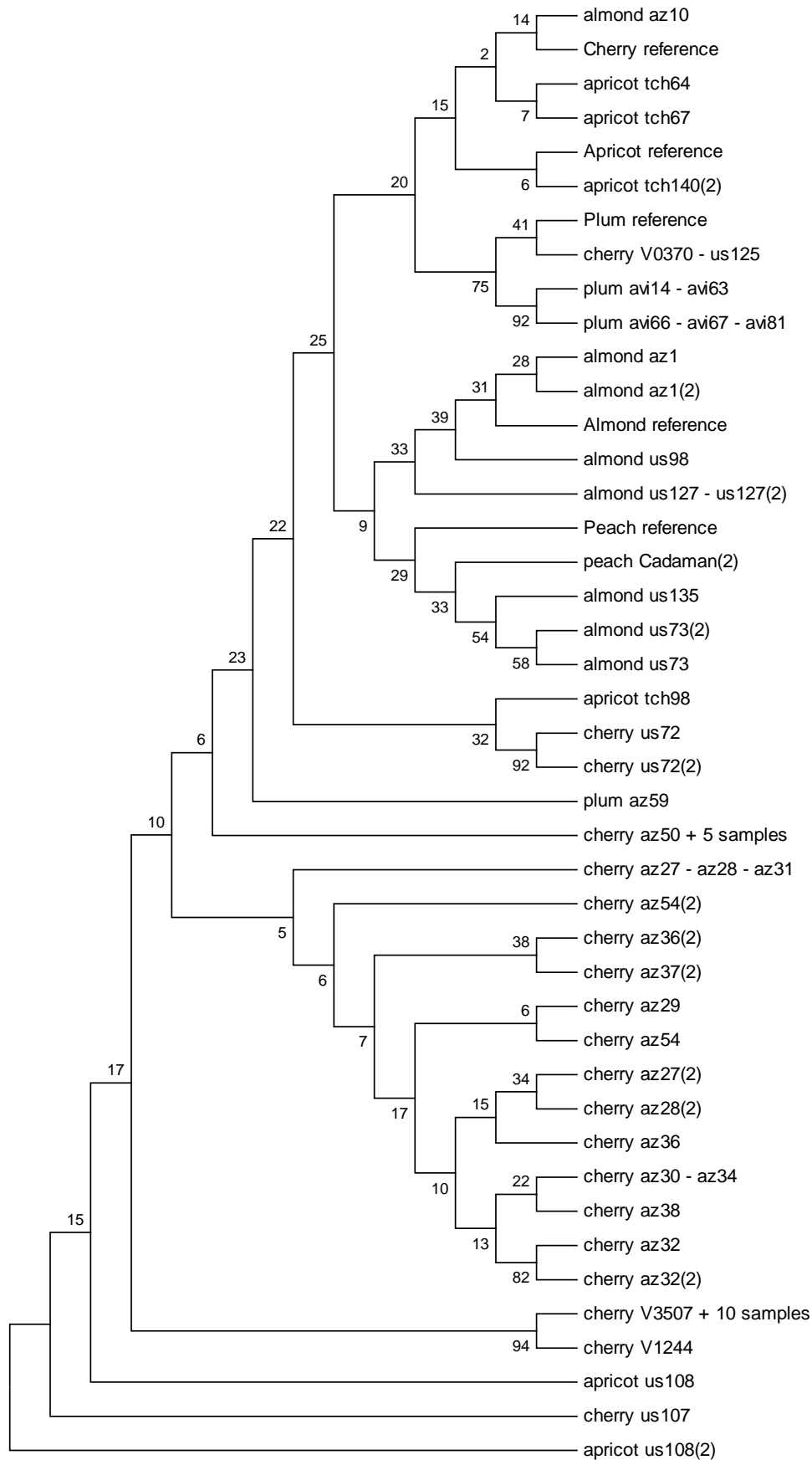


Figure 2b: Example of neighbour joining tree obtained from eIF4E gene in the case of mutations in interaction domains and affecting the stability of the protein. Same comment as above in Figure 2a.

d) Correlation between non-synonymous mutations in the *eIF4E* or *eIFiso4E* genes and resistance to PPV

In order to test for resistance to sharka disease and associate a specific haplotype with impaired PPV infection, bud sticks were sampled, when applicable, from corresponding mother trees presenting non-synonymous mutations in the *eIF4E* or *eIFiso4E* genes. They were grafted on PPV-infected rootstocks ('GF305') in a high-confinement greenhouse. This resistance test should allow correlating a variation in the sequence of the *eIF4E* genes with a resistant/susceptible phenotype. Nevertheless, further tests on progenies will have to be performed in the future to associate unambiguously this variant to resistance to PPV. Individuals presenting interesting modifications in one or the other *eIF4E* gene but in an heterozygous state are currently being self-pollinated (if possible) or crossed with another compatible variant. The F1 individuals will be tested, back to Bordeaux, for resistance to PPV as described in Decroocq et al. (2005).

In summary, during the past two reporting periods, we were able to:

- 1) Identify *Prunus* orthologues of the PPV recessive resistance genes, *eIF4E* and *eIFiso4E*
- 2) Identify *Prunus* trees bearing mutations in one or the other gene required for PPV infection.

Those *Prunus* trees will be further tested for resistance to PPV. Once validated, they will serve as new sources of resistance in the future European breeding programs.

4- USE AND DISSEMINATION OF THE RESULTS

The above mentioned *Prunus* individuals bearing a mutation in the *eIF4E* or *eIFiso4E* locus leading to resistance to PPV will be transferred, once validated, to *Prunus* breeders within the SharCo consortium and in EU. Information will be disseminated by mean of publications in peer-reviewed papers.

Preliminary publications dealing with the identification of natural variants departing from the susceptible individuals were released in the past two years as follows:

Tricon D., Rivard M., Sicard O., Mariette S., Decroocq V. Allelic diversity of genes coding eukaryotic initiation factor in Stone Fruit trees (Prunus species) for the identification of new sources of resistance to Plum Pox virus. Poster. MPMI Congress 2009.

Tricon, D., S. Mariette, and V. Decroocq. Survey of natural Stone Fruit diversity for the search of novel alleles of resistance to Plum pox virus (sharka disease). in International Conference on Green PLant breeding technologies. Poster. Vienna 2010.

Tricon D., Mariette S., Decroocq V., Search for natural variants of genes coding eukaryotic initiation factors in *Prunus* species: Identification of new sources of resistance to sharka disease. Oral communication, SharCo meeting, 5-9 september 2010.

Decroocq V., Tricon D., Faivre d'Arcier J., Astudillo J, Prieto H, Zhebentyayeva T, Abbott A.B., Candresse T., Mariette S., Knowledge-based strategies for the diversification and pyramiding of resistance mechanisms to *Plum pox virus* in stone fruit trees (*Prunus* sp.). Oral communication South Africa, 2010.

References cited in the text:

Decroocq V., Foulongne M., Lambert P., Le Gall O., Mantin C., Pascal T., Schurdi-Levraud V., Kervella J (2005). Analogues of virus resistance genes map to QTLs of resistance to sharka disease in *Prunus davidiana*. Mol. Genet. Genomics 272(6), 680-689.

Decroocq V., Sicard O., Alamillo J-M. , Lansac M., Eyquard J-P., García J-A, Candresse T., Le Gall O., Revers F. (2006) Multiple resistance traits control PPV infection in *Arabidopsis thaliana*. Mol. Plant Microbe Inter. 19: 541-549.

Escalettes, V., Dosba, F., Lansac, M., and Eyquard, J-P. 1998. Genetic resistance to Plum Pox Potyvirus in peaches. Acta Hort. 465:689-698

Gao, Z., E. Johansen, et al. (2004). "The potyvirus recessive resistance gene, sbm1, identifies a novel role for translation initiation factor eIF4E in cell-to-cell trafficking." The Plant Journal 40(3): 376-385.

Martinez-Gomez, P., F. Dicenta, and J.-M. Audergon, Behaviour of apricot (*Prunus armeniaca* L.) cultivars in the presence of sharka (plum pox potyvirus) : a review. Agronomie, 2000. 20: p. 407-422.

Nicaise, V., German-Retana, S., Sanjuan, R., Dubrana, M. P., Mazier, M., Maisonneuve, B., Candresse, T., Caranta, C., and Le Gall, O. 2003. The eukaryotic translation initiation factor 4E controls lettuce susceptibility to the Potyvirus Lettuce mosaic virus. Plant Physiol. 132 (3):1272-1282

Nicaise, V., et al., Coordinated and selective recruitment of eIF4E and eIF4G factors for potyvirus infection in *Arabidopsis thaliana*. FEBS Letters, 2007. 581(5): p. 1041-1046.

Robaglia C., Caranta C. Translation initiation factors: a weak link in plant RNA virus infection. *Trends in Plant Science*, vol.11 n°1 2006

Ruffel, S., et al., A natural recessive resistance gene against potato virus Y in pepper corresponds to the eukaryotic initiation factor 4E (eIF4E). *Plant J.*, 2002. 32(6): p. 1067-1075.

Ruffel, S. et al., The recessive potyvirus resistance gene *pot-1* is the tomato orthologue of the pepper *pvr2-eIF4E* gene. *Mol. Genet. Genomics*, 2005. 274: p. 346-353.

Stein, N., D. Perovic, et al. (2005). "The eukaryotic translation initiation factor 4E confers multiallelic recessive Bymovirus resistance in *Hordeum vulgare* (L.)." *The Plant Journal* 42: 912-922

Annex DG.2.2: List of the individuals from the different collections

EcoTilling number	Country of sampling	Country/region of origin	Name of cultivar	Prunus subgenera	Prunus species
avi1	France - Avignon (84)		Black armeniaca Markula	armeniaca	dasycarpa
avi2	France - Avignon (84)		Prunus davidiana 1	persica	davidiana
avi3	France - Avignon (84)		Prunus davidiana (C2)	persica	davidiana
avi4	France - Avignon (84)		ALNEM-1	amygdalus	dulcis
avi5	France - Avignon (84)	Bulgaria	A. webbii	amygdalus	dulcis
avi6	France - Avignon (84)		Prunus mume	armeniaca	mume
avi7	France - Avignon (84)		Ta - Tao = 2 Clemsen	persica	persica
avi8	France - Avignon (84)		Semis de Chine	persica	persica
avi9	France - Avignon (84)		Siberian C	persica	persica
avi10	France - Avignon (84)		Chiisan Corée du Sud.	persica	persica
avi11	France - Avignon (84)		Prunus simonii	prunus	simonii
avi12	France - Avignon (84)		Prunus subcordata 4	prunus	subcordata
avi13	France - Avignon (84)		Prunus triflora	prunus	triflora
avi14	France - Avignon (84)		Prunus ursina 106- 8	prunus	ursina
avi15	France - Avignon (84)		Prunus ussuriensis	prunus	ussuriensis
avi16	France - Avignon (84)		Prunus davidiana 4	persica	davidiana
avi17	France - Avignon (84)	Bulgaria	Malo Konare	persica	persica
avi18	France - Avignon (84)		A VNUK	armeniaca	armeniaca
avi19	France - Avignon (84)		SEO	armeniaca	
avi20	France - Avignon (84)		KIOTO	armeniaca	
avi21	France - Avignon (84)		P. bucharica (C6)	amygdalus	bucharica
avi22	France - Avignon (84)		A.fenzliana x A.bucharica-2	amygdalus	dulcis
avi23	France - Avignon (84)		P. fremontii	armeniaca	fremontii
avi24	France - Avignon (84)	USA	Nonpareil	amygdalus	dulcis
avi25	France - Avignon (84)		Ferganensis PI 113455	persica	persica
avi26	France - Avignon (84)	Spain	Marcona	amygdalus	dulcis
avi27	France - Avignon (84)		P. argentea 15-25	amygdalus	dulcis
avi28	France - Avignon (84)		P. davidiana 4	persica	davidiana
avi29	France - Avignon (84)		Semis de Chine	persica	persica
avi30	France - Avignon (84)		P. surcordata 4	prunus	subcordata
avi31	France - Avignon (84)		R270 x A. dehiscens (H25)	amygdalus	dulcis
avi32	France - Avignon (84)	France	Rubira	persica	persica
avi33	France - Avignon (84)		P. mira	amygdalus	mira
avi34	France - Avignon (84)		P. ussuriensis	prunus	ussuriensis
avi35	France - Avignon (84)	Italy	Tuono	amygdalus	dulcis
avi36	France - Avignon (84)	USA	Toka	prunus	salicina
avi37	France - Avignon (84)		P. armeniaca 114-9	armeniaca	armeniaca
avi38	France - Avignon (84)	Italy	Avola	amygdalus	dulcis
avi39	France - Avignon (84)		Ta - Tao = 2 Clemsen	persica	persica
avi40	France - Avignon (84)		A7806 T4 Roy Rom Arkansas	persica	persica
avi41	France - Avignon (84)		Chui Lum Tao Canada	persica	persica
avi42	France - Avignon (84)		P. tomentosa	prunus	salicina
avi43	France - Avignon (84)		P. brigantiaca 2	armeniaca	brigantina
avi44	France - Avignon (84)		P. mume	armeniaca	mume
avi45	France - Avignon (84)		P. davidiana 1	persica	davidiana
avi46	France - Avignon (84)		P. simonii	prunus	simonii
avi47	France - Avignon (84)		Black armeniaca Markula	armeniaca	dasycarpa
avi48	France - Avignon (84)	USA	Golden Japan	prunus	salicina
avi49	France - Avignon (84)	Bulgaria	Malo Konare	persica	persica
avi50	France - Avignon (84)		Prunus triflora	prunus	triflora
avi51	France - Avignon (84)		Pêcher R22 - 2 Japon	persica	persica
avi52	France - Avignon (84)	China	Nai	prunus	salicina
avi53	France - Avignon (84)	Israël	Alnem-1	amygdalus	dulcis
avi54	France - Avignon (84)		Prunus davidiana (C2)	persica	davidiana
avi55	France - Avignon (84)		Sinung Chui Mi Canada	persica	persica
avi56	France - Avignon (84)	Bulgaria	A. webbii	amygdalus	dulcis
avi57	France - Avignon (84)	France	GF305	persica	persica
avi58	France - Avignon (84)		Siberian C	persica	persica
avi59	France - Avignon (84)	China	P. simonii n°15	prunus	salicina
avi60	France - Avignon (84)	Tunisia	B250 type tunisien	persica	persica
avi61	France - Avignon (84)		P. ursina 106-8	prunus	ursina
avi62	France - Avignon (84)		Weito T6	cerasus	tomentosa
avi63	France - Avignon (84)		Semis d'Astaranskaya	prunus	cerasifera
avi64	France - Avignon (84)		Semis de miro purpurovaya (2x)	prunus	cerasifera
avi65	France - Avignon (84)		Myrobalan (pg)	prunus	cerasifera

avi66	France - Avignon (84)		2004/2456	armeniaca	
avi67	France - Avignon (84)		P2581 x A54 - 9	armeniaca	dasycarpa
avi68	France - Avignon (84)		P2951	prunus	
avi69	France - Avignon (84)		P. cerasifera ssp pontica	prunus	cerasifera
avi70	France - Avignon (84)		P2581 x A54 - 19	armeniaca	dasycarpa
avi71	France - Avignon (84)		P9038	prunus	
avi72	France - Avignon (84)		Ishtara (Ferciana I7033)	prunus	hyb interspé
avi73	France - Avignon (84)		P2581 x A54 - 34	armeniaca	dasycarpa
avi74	France - Avignon (84)		Myrobalan pourpre	prunus	cerasifera
avi75	France - Avignon (84)		MrS 2/5	prunus	hyb interspé
avi76	France - Avignon (84)		Myrobalan Sarde Rouge	prunus	cerasifera
avi77	France - Avignon (84)		P9153	prunus	
avi78	France - Avignon (84)		Torinel (Avifel)	prunus	hyb interspé
avi79	France - Avignon (84)		SP106	prunus	
avi80	France - Avignon (84)		Prunus ussuriensis	prunus	ussuriensis
avi81	France - Avignon (84)		SEO	armeniaca	
avi82	France - Avignon (84)		P9145	prunus	
avi83	France - Avignon (84)		Rionis	prunus	cerasifera
avi84	France - Avignon (84)		Texas	amygdalus	
avi85	France - Avignon (84)		Ferraduel	amygdalus	
avi86	France - Avignon (84)		1XL	amygdalus	
avi87	France - Avignon (84)		Mona	amygdalus	
avi88	France - Avignon (84)		Atocha	amygdalus	
avi89	France - Avignon (84)		Planeta	amygdalus	
avi90	France - Avignon (84)		Del Cid	amygdalus	
avi91	France - Avignon (84)		Genco	amygdalus	
avi92	France - Avignon (84)		All in one	amygdalus	
avi93	France - Avignon (84)		Rumbeta	amygdalus	
avi94	France - Avignon (84)		Francoli	amygdalus	
az1	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		amygdalus	
az2	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		persica	
az3	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		nectarine	
az4	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		amygdalus	
az5	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		armeniaca	
az6	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		persica	
az7	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		amygdalus	
az8	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		amygdalus	
az9	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		amygdalus	
az10	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		amygdalus	
az11	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		amygdalus	
az12	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource		amygdalus	
az13	Azerbaïdjan	Azerbaïdjan - Naxçivan		armeniaca	
az14	Azerbaïdjan	Azerbaïdjan - Naxçivan		armeniaca	
az15	Azerbaïdjan	Azerbaïdjan - Naxçivan		armeniaca	
az16	Azerbaïdjan	Azerbaïdjan - Naxçivan		persica	
az17	Azerbaïdjan	Azerbaïdjan - Naxçivan		amygdalus	
az18	Azerbaïdjan	Azerbaïdjan - Naxçivan		amygdalus	
az19	Azerbaïdjan	Azerbaïdjan - Naxçivan		amygdalus	
az20	Azerbaïdjan	Azerbaïdjan - Naxçivan		amygdalus	
az21	Azerbaïdjan	Azerbaïdjan - Naxçivan		amygdalus	
az22	Azerbaïdjan	Azerbaïdjan - Naxçivan		armeniaca	
az23	Azerbaïdjan	Azerbaïdjan - Naxçivan		myrobalan prunus	
az24	Azerbaïdjan	Azerbaïdjan - Naxçivan		myrobalan prunus	
az25	Azerbaïdjan	Azerbaïdjan - Naxçivan		myrobalan prunus	
az26	Azerbaïdjan	Azerbaïdjan - Naxçivan		myrobalan prunus	
az27	Azerbaïdjan	Azerbaïdjan - Naxçivan		cerasus	avium?
az28	Azerbaïdjan	Azerbaïdjan - Naxçivan		cerasus	
az29	Azerbaïdjan	Azerbaïdjan - Naxçivan		cerasus	
az30	Azerbaïdjan	Azerbaïdjan - Naxçivan		cerasus	
az31	Azerbaïdjan	Azerbaïdjan - Naxçivan		cerasus	

az32	Azerbaïdjan	Azerbaïdjan - Naxçivan	cerasus	
az33	Azerbaïdjan	Azerbaïdjan - Naxçivan	cerasus	
az34	Azerbaïdjan	Azerbaïdjan - Naxçivan	cerasus	
az35	Azerbaïdjan	Azerbaïdjan - Naxçivan	cerasus	
az36	Azerbaïdjan	Azerbaïdjan - Naxçivan	cerasus	
az37	Azerbaïdjan	Azerbaïdjan - Naxçivan	cerasus	
az38	Azerbaïdjan	Azerbaïdjan - Naxçivan	cerasus	
az39	Azerbaïdjan	Azerbaïdjan - Naxçivan	amygdalus	
az40	Azerbaïdjan	Azerbaïdjan - Naxçivan	amygdalus	
az41	Azerbaïdjan	Azerbaïdjan - Naxçivan	persica	
az42	Azerbaïdjan	Azerbaïdjan - Naxçivan	persica	
az43	Azerbaïdjan	Azerbaïdjan - Naxçivan	armeniaca	
az44	Azerbaïdjan	Azerbaïdjan - Naxçivan	armeniaca	
az45	Azerbaïdjan	Azerbaïdjan - Naxçivan	armeniaca	
az46	Azerbaïdjan	Azerbaïdjan - Naxçivan	armeniaca	
az47	Azerbaïdjan	Azerbaïdjan - Naxçivan	armeniaca	
az48	Azerbaïdjan	Azerbaïdjan - Naxçivan	myrobalan prunus	
az49	Azerbaïdjan	Azerbaïdjan - Naxçivan	myrobalan prunus	
az50	Azerbaïdjan	Azerbaïdjan - Naxçivan	cerasus	cerasus
az51	Azerbaïdjan	Azerbaïdjan - Naxçivan	myrobalan prunus	
az52	Azerbaïdjan	Azerbaïdjan - Naxçivan	armeniaca	armeniaca
az53	Azerbaïdjan	Azerbaïdjan - Naxçivan	persica	
az54	Azerbaïdjan	Azerbaïdjan - Naxçivan	cerasus	
az55	Azerbaïdjan	Azerbaïdjan - Guba	persica	
az56	Azerbaïdjan	Azerbaïdjan - Guba	persica	
az57	Azerbaïdjan	Azerbaïdjan - Guba	myrobalan prunus	
az58	Azerbaïdjan	Azerbaïdjan - Guba	armeniaca	
az59	Azerbaïdjan	Azerbaïdjan - Guba	myrobalan prunus	
az60	Azerbaïdjan	Azerbaïdjan - Guba	armeniaca	armeniaca
az61	Azerbaïdjan	Azerbaïdjan - Guba	prunus	domestica/cerasifera?
az62	Azerbaïdjan	Azerbaïdjan - Guba	armeniaca	armeniaca
az63	Azerbaïdjan	Azerbaïdjan - Guba	persica	
az64	Azerbaïdjan	Azerbaïdjan - Guba	prunus	domestica/cerasifera?
az65	Azerbaïdjan	Azerbaïdjan - Guba	cerasus	cerasus
az66	Azerbaïdjan	Azerbaïdjan - Guba	cerasus	cerasus
az67	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	persica	persica
az68	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	persica	persica
az69	Azerbaïdjan	Azerbaïdjan - Lèrik	armeniaca	armeniaca
az70	Azerbaïdjan	Azerbaïdjan - Lèrik	armeniaca	armeniaca
az71	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	armeniaca	armeniaca
az72	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	armeniaca	armeniaca
az73	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	armeniaca	armeniaca
az74	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	armeniaca	armeniaca
az75	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	armeniaca	armeniaca
az76	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	armeniaca	armeniaca
az77	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	armeniaca	armeniaca
az78	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	armeniaca	armeniaca
az79	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand	armeniaca	armeniaca
az80	Azerbaïdjan	Azerbaïdjan - Abseran	armeniaca	armeniaca
az81	Azerbaïdjan	Azerbaïdjan - Goranboy - Qizil Hacili	persica	persica
az82	Azerbaïdjan	Azerbaïdjan - Seki Genofond	persica	persica
az83	Azerbaïdjan	Azerbaïdjan - Seki Genofond	persica	persica
az84	Azerbaïdjan	Azerbaïdjan - Seki Genofond	armeniaca	armeniaca
az85	Azerbaïdjan	Azerbaïdjan - Seki Genofond	persica	persica
az86	Azerbaïdjan	Azerbaïdjan - Seki Mountain	armeniaca	armeniaca
az87	Azerbaïdjan	Azerbaïdjan - Institute of	nectarine	

az88	Azerbaïdjan	Genetic Ressource Azerbaïdjan - Institute of Genetic Ressource	nectarine	
az89	Azerbaïdjan	Azerbaïdjan - Lahic village	armeniaca	armeniaca
az90	Azerbaïdjan	Azerbaïdjan - Seki Mountain	armeniaca	armeniaca
az91	Azerbaïdjan	Azerbaïdjan - Seki Mountain	armeniaca	armeniaca
az92	Azerbaïdjan	Azerbaïdjan - Seki Genofond	persica	persica
az93	Azerbaïdjan	Azerbaïdjan - Seki Genofond	persica	persica
az94	Azerbaïdjan	Azerbaïdjan - Seki Genofond	armeniaca	armeniaca
az95	Azerbaïdjan	Azerbaïdjan - Goranboy - Balakurud	persica	persica
az96	Azerbaïdjan	Azerbaïdjan - Alandar	prunus	japanese plum
az97	Azerbaïdjan	Azerbaïdjan - Seki Mountain	armeniaca	armeniaca
az98	Azerbaïdjan	Azerbaïdjan - Seki Genofond	persica	persica
az99	Azerbaïdjan	Azerbaïdjan - Seki Mountain	armeniaca	
az100	Azerbaïdjan	Azerbaïdjan - Gəcən	armeniaca	armeniaca
az101	Azerbaïdjan	Azerbaïdjan - Goranboy - Balakurd	armeniaca	
az102	Azerbaïdjan	Azerbaïdjan - LaHic school	persica	
az103	Azerbaïdjan	Azerbaïdjan - Goranboy - Balakurd	armeniaca	
az104	Azerbaïdjan	Azerbaïdjan - Goranboy - Balakurd	armeniaca	
az105	Azerbaïdjan	Azerbaïdjan - Gəcən	persica	persica
az106	Azerbaïdjan	Azerbaïdjan - Gəcən	armeniaca	armeniaca
az107	Azerbaïdjan	Azerbaïdjan - LaHic school	armeniaca	
az108	Azerbaïdjan	Azerbaïdjan - Gəcən	armeniaca	armeniaca
az109	Azerbaïdjan	Azerbaïdjan - LaHic school	armeniaca	armeniaca
az110	Azerbaïdjan	Azerbaïdjan - Seki Mountain	armeniaca	
az111	Azerbaïdjan	Azerbaïdjan - Gobustan	armeniaca	armeniaca
az112	Azerbaïdjan	Azerbaïdjan - Gobustan	armeniaca	armeniaca
az113	Azerbaïdjan	Azerbaïdjan - Gobustan	armeniaca	armeniaca
az114	Azerbaïdjan	Azerbaïdjan - Seki Genofond	armeniaca	armeniaca
az115	Azerbaïdjan	Azerbaïdjan - Seki Genofond	persica	persica
az116	Azerbaïdjan	Azerbaïdjan - Institute of Genetic Ressource	armeniaca	
az117	Azerbaïdjan	Azerbaïdjan - LaHic school	prunus	cerasifera
az118	Azerbaïdjan	Azerbaïdjan - LaHic school	prunus	cerasifera
az119	Azerbaïdjan	Azerbaïdjan - Lənkəran	prunus	cerasifera
az120	Azerbaïdjan	Azerbaïdjan - Lənkəran	prunus	cerasifera
az121	Azerbaïdjan	Azerbaïdjan - Lərik - Zuvand	prunus	cerasifera?
az122	Azerbaïdjan	Azerbaïdjan - Seki Mountain	prunus	cerasifera
az123	Azerbaïdjan	Azerbaïdjan	prunus	cerasifera
az124	Azerbaïdjan	Azerbaïdjan - Seki	prunus	cerasifera
az125	Azerbaïdjan	Azerbaïdjan - Gəcən	prunus	cerasifera?
az126	Azerbaïdjan	Azerbaïdjan - Gəcən	prunus	cerasifera
az127	Azerbaïdjan	Azerbaïdjan - Seki	prunus	cerasifera
az128	Azerbaïdjan	Azerbaïdjan - Seki Genofond	prunus	cerasifera
az129	Azerbaïdjan	Azerbaïdjan - Seki Genofond	prunus	cerasifera
az130	Azerbaïdjan	Azerbaïdjan - LaHic school	prunus	cerasifera?
az131	Azerbaïdjan	Azerbaïdjan - Lərik - Zuvand	prunus	cerasifera
az132	Azerbaïdjan	Azerbaïdjan - Lərik - Zuvand	cerasus	cerasus
az133	Azerbaïdjan	Azerbaïdjan - Lərik -	cerasus	cerasus

az134	Azerbaïdjan	Zuvand Azerbaïdjan - Lèrik - Zuvand		cerasus	avium
az135	Azerbaïdjan	Azerbaïdjan - Seki Genofond		cerasus	avium
az136	Azerbaïdjan	Azerbaïdjan - Seki Genofond		cerasus	avium
az137	Azerbaïdjan	Azerbaïdjan - Seki Genofond		cerasus	avium
az138	Azerbaïdjan	Azerbaïdjan - Seki Genofond		cerasus	cerasus
az139	Azerbaïdjan	Azerbaïdjan - Seki Genofond		cerasus	avium
az140	Azerbaïdjan	Azerbaïdjan - Seki Genofond		cerasus	avium
az141	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand		cerasus	avium
az142	Azerbaïdjan	Azerbaïdjan - Lèrik - Zuvand		cerasus	avium
az143	Azerbaïdjan			cerasus	cerasus?
s16	France - Bordeaux (33)		Royale de Barsac	persica	
s42	France - Bordeaux (33)		Amsden	persica	
s251	France - Bordeaux (33)		Grosse Mignonne	persica	
s257	France - Bordeaux (33)		Madeleine Blanche	persica	
s1591	France - Bordeaux (33)		Millecoton de la Toussaint	persica	
s2293	France - Bordeaux (33)		Rio Oso Gem	persica	
s2464	France - Bordeaux (33)		Okinawa	persica	
s2491	France - Bordeaux (33)		Type sauvage	persica	
s2535	France - Bordeaux (33)		Type spontané de Corée du Sud	persica	
s2686	France - Bordeaux (33)		Double pink	persica	
s2726	France - Bordeaux (33)		Santa Rosa	persica	
s2835	France - Bordeaux (33)		Saturn	persica	
s2844	France - Bordeaux (33)		Russels Red	persica	
s3527	France - Bordeaux (33)		Vesuvio	persica	
s3528	France - Bordeaux (33)		Vivian	persica	
s3532	France - Bordeaux (33)		Michelini	persica	
s3709	France - Bordeaux (33)		Desert Gold	persica	
s3906	France - Bordeaux (33)		Walgant	persica	
s3914	France - Bordeaux (33)		Sweeney	persica	
s3915	France - Bordeaux (33)		Tufts	persica	
s3916	France - Bordeaux (33)		Merriam	persica	
s3931	France - Bordeaux (33)		Suncrest	persica	
s4072	France - Bordeaux (33)		Loadel	persica	
s4073	France - Bordeaux (33)		J.H. Hale	persica	
s4684	France - Bordeaux (33)		Kakamas	persica	
s5130	France - Bordeaux (33)		Yoo Myeong	persica	
s5279	France - Bordeaux (33)		Akatsuki	persica	
s5396	France - Bordeaux (33)		Huang Lu	persica	
s5397	France - Bordeaux (33)		Jing Yu	persica	
s5398	France - Bordeaux (33)		Bai Hua	persica	
s5510	France - Bordeaux (33)		Shen Chou Honey	persica	
s5520	France - Bordeaux (33)		Feng Hua Yulu	persica	
s5543	France - Bordeaux (33)		Impora	persica	
s5544	France - Bordeaux (33)		Monate	persica	
s5545	France - Bordeaux (33)		Talana	persica	
s5583	France - Bordeaux (33)		Calvis	persica	
s5584	France - Bordeaux (33)		Mira Flores	persica	
s5634	France - Bordeaux (33)		Redwing	persica	
s5636	France - Bordeaux (33)		Gang Shan Bai	persica	
s5637	France - Bordeaux (33)		Bai Feng	persica	
s5638	France - Bordeaux (33)		Wu Yue Xian	persica	
s5639	France - Bordeaux (33)		Jing Hong	persica	
s5640	France - Bordeaux (33)		Jing Yan	persica	
s5715	France - Bordeaux (33)		Silver Lode	persica	
s5782	France - Bordeaux (33)		Bailou	persica	
s5789	France - Bordeaux (33)		Shimizu Wase	persica	
s5791	France - Bordeaux (33)		Shimizu Hakuto	persica	
s5846	France - Bordeaux (33)		Pêcher Chinois n°4	persica	
s5905	France - Bordeaux (33)		Atkasuki	persica	
s6015	France - Bordeaux (33)		Pêcher Chinois n°4	persica	
s7181	France - Bordeaux (33)		Angevine de Buzet	persica	

s7184	France - Bordeaux (33)		Combet n°2	persica	
s7187	France - Bordeaux (33)		Grosse Mignonne	persica	
s7192	France - Bordeaux (33)		Roussane Royale	persica	
s7253	France - Bordeaux (33)		Albo 64	persica	
s7257	France - Bordeaux (33)		Iran 6:58	persica	
s7258	France - Bordeaux (33)		Iran 6:59	persica	
s7260	France - Bordeaux (33)		Auto 5 de Weeping flower peach	persica	
s7261	France - Bordeaux (33)		Auto 9 de Weeping flower peach	persica	
s7263	France - Bordeaux (33)		Haploïde (from Lovel)	persica	
s8309	France - Bordeaux (33)		Nectarine Cerise	persica	
s8324	France - Bordeaux (33)		Téton de Vénus	persica	
P.pumila	France - Bordeaux (33)			cerasus	pumila
V0370	France - Bordeaux (33)	France	Burlat	cerasus	avium
V0804	France - Bordeaux (33)		Napoléon	cerasus	avium
V0879	France - Bordeaux (33)			cerasus	
V0897	France - Bordeaux (33)	Spain	Cristobalina	cerasus	avium
V0935	France - Bordeaux (33)	France	Guillaume	cerasus	avium
V1053	France - Bordeaux (33)		V1053	cerasus	incisa
V1144	France - Bordeaux (33)		Vladimir 1962	cerasus	fruticosa ??
V1199	France - Bordeaux (33)			cerasus	subhirtella
V1215	France - Bordeaux (33)			cerasus	japonica
V1244	France - Bordeaux (33)			cerasus	yedoensis pendula
V1288	France - Bordeaux (33)			cerasus	serrulata Shidare
V1322	France - Bordeaux (33)			cerasus	Sakura
V1339	France - Bordeaux (33)			cerasus	conradinae
V1346	France - Bordeaux (33)			cerasus	semitplena
V1389	France - Bordeaux (33)			cerasus	nipponica Syodai
V1393	France - Bordeaux (33)			cerasus	Makai
V1400	France - Bordeaux (33)			cerasus	nipponica
V1672	France - Bordeaux (33)			cerasus	yedoensis gazaodo
V1877	France - Bordeaux (33)			cerasus	conradinae
V1884	France - Bordeaux (33)	Germany	Hedelfingen	cerasus	nipponica
V1931	France - Bordeaux (33)	USA	Rainier	cerasus	padus
V2033	France - Bordeaux (33)	France	Camus de Vénasque	cerasus	serotina asphenifolia
V2155	France - Bordeaux (33)	USA	Garnet	cerasus	avium
V2180	France - Bordeaux (33)			cerasus	avium
V2205	France - Bordeaux (33)			cerasus	avium
V2345	France - Bordeaux (33)	Hungary	Germersdorf	cerasus	serrulata Kesoi
V2472	France - Bordeaux (33)	Italy	Duroni 3	cerasus	pandi
V2509	France - Bordeaux (33)	Czech epublic	Kadia	cerasus	avium
V2672	France - Bordeaux (33)	Hungary	Badacsonyi	cerasus	avium
V2678	France - Bordeaux (33)	Iran	Noire de Meched	cerasus	avium
V2865	France - Bordeaux (33)	Italy	Impériale	cerasus	avium
V3505	France - Bordeaux (33)			cerasus	avium
V3506	France - Bordeaux (33)			cerasus	subhirtella pendula
V3507	France - Bordeaux (33)			cerasus	subhirtella
V3508	France - Bordeaux (33)			cerasus	cerasus
V3509	France - Bordeaux (33)			cerasus	cerasus
V3512	France - Bordeaux (33)			cerasus	avium
V3517	France - Bordeaux (33)			cerasus	yedoensis
V3524	France - Bordeaux (33)			cerasus	fruticosa?
V3720	France - Bordeaux (33)			cerasus	incisa
V3768	France - Bordeaux (33)	Belgium		cerasus	serrulata shirofugen
V3785	France - Bordeaux (33)			cerasus	avium
V3816	France - Bordeaux (33)			cerasus	sargentii
V3818	France - Bordeaux (33)			padus	serotina
V3940	France - Bordeaux (33)			cerasus	tomentosa
V3943	France - Bordeaux (33)		Pentaleb	cerasus	mahaleb
Cadaman	France - Bordeaux (33)		Cadaman	cerasus	mahaleb
GF557	France - Bordeaux (33)		GF557	persica	persica
P2224	France - Bordeaux (33)			persica	persica
P2868	France - Bordeaux (33)			persica	almondxpeach
P3775	France - Bordeaux (33)			persica	almondxpeach
REDF8	France - Bordeaux (33)		REDF8_1	persica	almondxpeach
Kamarat	Italy		Kamarat	persica	persica
ch0	China	China - Nanjing	Hua	persica	persica

ch0bis	China	China - Nanjing	Hua	persica	persica
ch1	China	China - Nanjing	Bai Hua Shan Tao	persica	persica davidiana
ch2	China	China - Nanjing	Hong Hua Shan Tao	persica	persica davidiana
ch3	China	China - Nanjing	Sha Che Qiu Tao	persica	persica ferganensis
ch4	China	China - Nanjing	Mai Li	persica	persica glandulosa
ch5	China	China - Nanjing	Yu Li (Dan Ban)	persica	persica japonica
ch6	China	China - Nanjing	Mao Ying Tao (Hong Guo)	cerasus	persica tomentosa
ch7	China	China - Nanjing	Mao Ying Tao (Bai Guo)	cerasus	persica tomentosa
ch8	China	China - Nanjing	Gan Su Tao	persica	persica kansuensis
ch9	China	China - Nanjing	Guang He Tao	persica	persica mira
ch10	China	China - Nanjing	Mao Tao 1#	persica	persica persica
ch11	China	China - Nanjing	Mao Tao 2#	persica	persica persica
ch12	China	China - Nanjing	You Pan Tao	persica	persica persica
ch13	China	China - Nanjing	Da Tuan Mi Lu	persica	persica persica
ch14	China	China - Nanjing	Wu Jiang Bai	persica	persica persica
ch15	China	China - Nanjing	Da Hong Hua	persica	persica persica
ch16	China	China - Nanjing	Wei Nan Tian Tao	persica	persica persica
ch17	China	China - Nanjing	Hong Gan Lu	persica	persica persica
ch18	China	China - Nanjing	Qing Si Tao	persica	persica persica
ch19	China	China - Nanjing	Tian Jin Huang Rou	persica	persica persica
ch20	China	China - Nanjing	Liu Yang Si Jin Tao	persica	persica persica
ch21	China	China - Nanjing	Ping Bei Zi	persica	persica persica
ch22	China	China - Nanjing	Bai Sha	persica	persica persica
ch23	China	China - Nanjing	Xia Ji Tao	persica	persica persica
ch24	China	China - Nanjing	Gui Zhou Qing Tao	persica	persica persica
ch25	China	China - Nanjing	Nan Shan Tian Tao	persica	persica persica
ch26	China	China - Nanjing	Sa Hua Hong Pan Tao	persica	persica persica
ch27	China	China - Nanjing	Wu Yue Xian Bian Gan	persica	persica persica
ch28	China	China - Nanjing	Ju Hua Tao	persica	persica persica
ch29	China	China - Nanjing	Wan Hu Jing	persica	persica persica
ch30	China	China - Nanjing	Yan Zhi Tao	persica	persica persica
ch31	China	China - Nanjing	Hei You Tao	persica	persica persica
ch32	China	China - Nanjing		persica	persica mume
ch33	China	China - Nanjing		armeniaca	persica mume
ch34	China	China - Nanjing		armeniaca	persica mume
ch35	China	China - Nanjing		armeniaca	persica mume
ch36	China	China - Nanjing		armeniaca	persica mume
ch37	China	China - Nanjing		armeniaca	persica mume
ch38	China	China - Xiongyue		armeniaca	persica armeniaca
ch39	China	China - Xiongyue		armeniaca	persica armeniaca
ch40	China	China - Xiongyue		armeniaca	persica armeniaca
ch41	China	China - Xiongyue		armeniaca	persica armeniaca
ch42	China	China - Xiongyue		armeniaca	persica armeniaca
ch43	China	China - Xiongyue		armeniaca	persica armeniaca
ch44	China	China - Xiongyue		armeniaca	persica armeniaca
ch45	China	China - Xiongyue		armeniaca	persica armeniaca
ch46	China	China - Xiongyue		armeniaca	persica armeniaca
ch47	China	China - Xiongyue		armeniaca	persica armeniaca
ch48	China	China - Xiongyue		armeniaca	persica armeniaca
ch49	China	China - Xiongyue		armeniaca	persica armeniaca
ch50	China	China - Xiongyue		armeniaca	persica armeniaca
ch51	China	China - Xiongyue		prunus	Wild european prunus
ch52	China	China - Xiongyue		armeniaca	persica armeniaca
ch53	China	China - Dalian		persica	persica persica
ch54	China	China - Beijing		persica	persica persica
ch55	China	China - Beijing		persica	persica persica
ch56	China	China - Beijing		armeniaca	persica sibirica
ch57	China	China - Beijing		cerasus	persica tomentosa
ch58	China	China - Beijing		persica	persica davidiana
ch59	China	China - Beijing	Fenghou	armeniaca	persica mume
ch60	China	China - Beijing	Wu bao Chui Zhi	persica	persica persica
ch61	China	China - Beijing		persica	persica persica
ch62	China	China - Beijing		persica	persica persica ?
ch63	China	China - Beijing		persica	persica persica
ch64	China	China - Beijing	Dan Ban Shou Fen	persica	persica persica
ch65	China	China - Beijing		persica	persica persica
ch66	China	China - Beijing	Shou Hong	persica	persica persica
ch67	China	China - Beijing	Canada Red	padus	persica virginiana
ch68	China	China - Beijing		persica	persica persica

ch69	China	China - Beijing		persica	
ch70	China	China - Beijing		persica	
ch71	China	China - Beijing		persica	
ch72	China	China - Beijing		persica	
ch73	China	China - Beijing		persica	
ch74	China	China - Beijing		persica	davidiana
ch75	China	China - Beijing		persica	davidiana ?
ch76	China	China - Beijing		persica	
ch77	China	China - Beijing		persica	
ch78	China	China - Beijing		persica	
ch79	China	China - Beijing		persica ???	
ch80	China	China - Beijing		armeniaca	armeniaca?
ch81	China	China - Beijing		persica	mira?
ch82	China	China - Beijing		persica	persica
ch83	China	China - Beijing		persica	rubira
ch84	China	China - Beijing		cerasus	
ch85	China	China - Wuhan		persica	persica
ch86	China	China - Wuhan		persica	ferganensis
ch87	China	China - Wuhan	Yuetlu	persica	davidiana
ch88	China	China - Wuhan	C.de Vos ex. Henry	persica	mira
ch89	China	China - Wuhan		persica	persica
ch90	China	China - Wuhan		persica	persica
ch91	China	China - Wuhan		persica	persica
ch92	China	China - Wuhan		persica	persica
ch93	China	China - Wuhan		armeniaca	armeniaca or mume ?
ch94	China	China - Wuhan		armeniaca	armeniaca or mume ?
ch95	China	China - Wuhan		armeniaca	armeniaca or mume ?
ch96	China	China - Wuhan		persica	mira
ch97	China	China - Wuhan		persica	dav
ch98	China	China - Wuhan		persica	dav
ch99	China	China - Wuhan		persica	dav
ch100	China	China - Wuhan		armeniaca	armeniaca
ch101	China	China - Wuhan		persica	persica
ch102	China	China - Zhengzhou		persica	kansuensis
ch103	China	China - Zhengzhou		persica	mira
ch104	China	China - Zhengzhou		persica	mira or davidiana?
ch105	China	China - Zhengzhou		amygdalus/persica	wild almond
ch106	China	China - Nanjing		persica	davidiana
ch107	China	China - Nanjing		armeniaca	mume
ch108	China	China - Nanjing	Chinese cherry	cerasus	
ch109	China	China - Nanjing	Chui Zhi	persica	persica
ch110	China	China - Nanjing	Chui Zhi	persica	persica
ch111	China	China - Nanjing	Kuan Yang chui Zhi	persica	persica
tch1	Czech Republic	Ukrainia	Vognik	armeniaca	
tch2	Czech Republic		Brigantina x Olimp	armeniaca	
tch3	Czech Republic	Ukrainia	Skarb	armeniaca	
tch4	Czech Republic	Ukrainia	Cudovjy	armeniaca	
tch5	Czech Republic	Ukrainia	Prizer	armeniaca	
tch6	Czech Republic	Mid-Asia	Churmai	armeniaca	
tch7	Czech Republic	Slovakia	(Vesprima)	armeniaca	
tch8	Czech Republic	Ukrainia	Bronzovjy	armeniaca	
tch9	Czech Republic	Bulgaria	Colov 19	armeniaca	
tch10	Czech Republic		Nadezda	armeniaca	
tch11	Czech Republic	New Jersey	(NJA 55)	armeniaca	
tch12	Czech Republic	Ukrainia	Zorkij	armeniaca	
tch13	Czech Republic	Ukrainia	Kostinskij	armeniaca	
tch14	Czech Republic		Beliana	armeniaca	
tch15	Czech Republic		(Stepnaz Oranz.)	armeniaca	
tch16	Czech Republic	France	(Poier / Poyer)	armeniaca	
tch17	Czech Republic	Poland	Nachod. Zazrak	armeniaca	
tch18	Czech Republic	Poland	Nach. Krajova	armeniaca	
tch19	Czech Republic	Mid-Asia	Ke cpsar	armeniaca	
tch20	Czech Republic	Armenia	Abu talibu	armeniaca	
tch21	Czech Republic		(Ledana)	armeniaca	
tch22	Czech Republic		Velvaglo V.I.	armeniaca	
tch23	Czech Republic		Harglow	armeniaca	
tch24	Czech Republic		Lerosa	armeniaca	
tch25	Czech Republic	Romania	Dacia	armeniaca	
tch26	Czech Republic	Austria	Klosterneuburger	armeniaca	

tch27	Czech Republic	New Jersey	Aurora	armeniaca
tch28	Czech Republic	Mid-Asia	Lefrosta	armeniaca
tch29	Czech Republic		Roxanna	armeniaca
tch30	Czech Republic	China	Chuang Sin	armeniaca
tch31	Czech Republic	Ukrainia	Narjadnyj	armeniaca
tch32	Czech Republic	USA	Blenheim Orange	armeniaca
tch33	Czech Republic	Czech Republic	LE-806	armeniaca
tch34	Czech Republic		Bai Gon	armeniaca
tch35	Czech Republic	Mid-Asia	Poljus Junskij	armeniaca
tch36	Czech Republic		(Lakanyj)	armeniaca
tch37	Czech Republic	Canada	Tilton IRS5-1AC1-12	armeniaca
tch38	Czech Republic	Ukrainia	Vympel	armeniaca
tch39	Czech Republic	China	C4 R8 T22	armeniaca
tch40	Czech Republic	Romania	(Mamaia)	armeniaca
tch41	Czech Republic	China	Moi-Chuasin	armeniaca
tch42	Czech Republic		Radka	armeniaca
tch43	Czech Republic		(Neptun)	armeniaca
tch44	Czech Republic	China	In Bej Sin	armeniaca
tch45	Czech Republic	Armenia	Vardaguin vagdaas	armeniaca
tch46	Czech Republic	China	Cina	armeniaca
tch47	Czech Republic	Romania	Marie de Cenad	armeniaca
tch48	Czech Republic	Canada	(Harogem)	armeniaca
tch49	Czech Republic	Moldavia	Kostjuzenskij	armeniaca
tch50	Czech Republic		Vestar	armeniaca
tch51	Czech Republic	Moldavia	(5-17-103)	armeniaca
tch52	Czech Republic	Ukrainia	Gvardejskij	armeniaca
tch53	Czech Republic	USA	Veecot	armeniaca
tch54	Czech Republic	Mid-Asia	Arzam. Arom.	armeniaca
tch55	Czech Republic		M 49	armeniaca
tch56	Czech Republic		Riland	armeniaca
tch57	Czech Republic		(Lejuna)	armeniaca
tch58	Czech Republic	USA	Alfred	armeniaca
tch59	Czech Republic		(Vynoslivyj)	armeniaca
tch60	Czech Republic	USA	Salach	armeniaca
tch61	Czech Republic	Canada	Hargrand	armeniaca
tch62	Czech Republic	Ukrainia	Melitopolskij cjornij	armeniaca
tch63	Czech Republic	Ukrainia	Priusadebnyj	armeniaca
tch64	Czech Republic		Lebela	armeniaca
tch65	Czech Republic	Ukrainia	Lunik	armeniaca
tch66	Czech Republic	USA	Perfection IR213-1B	armeniaca
tch67	Czech Republic	Hungaria	Keczke mete rosen	armeniaca
tch68	Czech Republic	USA	(Wenatchee IR95-2C1-10)	armeniaca
tch69	Czech Republic		Scout	armeniaca
tch70	Czech Republic	USA	Nugget	armeniaca
tch71	Czech Republic	China	Santungska	armeniaca
tch72	Czech Republic		A Ansu	armeniaca
tch73	Czech Republic	Ukrainia	Ananasnyj cjuripinskij	armeniaca
tch74	Czech Republic		(Iskra)	armeniaca
tch75	Czech Republic		Achrori	armeniaca
tch76	Czech Republic	Czech Republic	PLM 78 FISR	armeniaca
tch77	Czech Republic	China	Da-Yu-Bada	armeniaca
tch78	Czech Republic	Mid-Asia	Julskij 205	armeniaca
tch79	Czech Republic	Czech Republic	Hajek	armeniaca
tch80	Czech Republic		M 56	armeniaca
tch81	Czech Republic		Vnuk Krasnosocokogo	armeniaca
tch82	Czech Republic	China	Mai-Che-Sin	armeniaca
tch83	Czech Republic	China	Mai-Huang	armeniaca
tch84	Czech Republic	France	Aprikose von Nancy	armeniaca
tch85	Czech Republic	Mid-Asia	Zard	armeniaca
tch86	Czech Republic		Oranzevo krasnyj	armeniaca
tch87	Czech Republic	China	Juan-Sin I	armeniaca
tch88	Czech Republic		M 57	armeniaca
tch89	Czech Republic		(Sanagjann rannyj)	armeniaca
tch90	Czech Republic		Forum	armeniaca
tch91	Czech Republic	Italy	(San castrese)	armeniaca
tch92	Czech Republic		(NJ 19)	armeniaca
tch93	Czech Republic	China	Chuan Shi Hong	armeniaca
tch94	Czech Republic		M 59	armeniaca
tch95	Czech Republic		M 47	armeniaca

tch96	Czech Republic		(M 51)	armeniaca
tch97	Czech Republic	Bulgaria	Gergana	armeniaca
tch98	Czech Republic		NJA 2	armeniaca
tch99	Czech Republic	Ukrainia	Strepet	armeniaca
tch100	Czech Republic	France	Paviot	armeniaca
tch101	Czech Republic	Iran	Lasgerdi maskad	armeniaca
tch102	Czech Republic		Parnas 11/1-8	armeniaca
tch103	Czech Republic	Bulagrie	Sem Badem Erik	armeniaca
tch104	Czech Republic	Ukrainia	(Krymskij Medunec)	armeniaca
tch105	Czech Republic	China	Pastyrik 146	armeniaca
tch106	Czech Republic		Karola	armeniaca
tch107	Czech Republic		P.brigantina	armeniaca
tch108	Czech Republic		P.davidiana	armeniaca
tch109	Czech Republic		P.salicina	armeniaca
tch110	Czech Republic		Interspecific Cerasif x per	armeniaca
tch111	Czech Republic		P.variata	armeniaca
tch112	Czech Republic		P.dulcis	armeniaca
tch113	Czech Republic		P.tomentosa	armeniaca
tch114	Czech Republic		Barrier Hybrid	armeniaca
tch115	Czech Republic		Saman hong	armeniaca
tch116	Czech Republic		Liaonig	armeniaca
tch117	Czech Republic		Eurazija	armeniaca
tch118	Czech Republic		Vezenaja planja	armeniaca
tch119	Czech Republic		LE-2926	armeniaca
tch120	Czech Republic		Betinka	armeniaca
tch121	Czech Republic		LE-3241	armeniaca
tch122	Czech Republic		LE-2904	armeniaca
tch123	Czech Republic	Turkey	Hassan Be	armeniaca
tch124	Czech Republic	Italy	Boccuccia spinosa	armeniaca
tch125	Czech Republic		Veverka	armeniaca
tch126	Czech Republic	France	Paviot	armeniaca
tch127	Czech Republic	Turkey	Kabasi	armeniaca
tch128	Czech Republic	Mid-Asia	Mula sadyk	armeniaca
tch129	Czech Republic	Russia	P.salicina	armeniaca
tch130	Czech Republic		LE-2927	armeniaca
tch131	Czech Republic	Ukrainia	Oblan	armeniaca
tch132	Czech Republic		Nectarensis	armeniaca
tch133	Czech Republic		Persidiana	armeniaca
tch134	Czech Republic	Ukrainia	67.48	armeniaca
tch135	Czech Republic		Nectadiana	armeniaca
tch136	Czech Republic		VUA 1	armeniaca
tch137	Czech Republic		AP1	armeniaca
tch138	Czech Republic		24.72	armeniaca
tch139	Czech Republic		P.pumilla	armeniaca
tch140	Czech Republic		P.siberica	armeniaca
tch141	Czech Republic		Jevpatorijskij	persica
tch142	Czech Republic		Nikitskij	amygdalus
tch143	Czech Republic	China	98_7_10	persica
tch144	Czech Republic	Ukrainia	Dojmoocka Dnepr	persica
tch145	Czech Republic	Ukrainia	Druzhiba narodov	persica
tch146	Czech Republic	China	Duan Yu	persica
tch147	Czech Republic	China	Fei chenq tao	persica
tch148	Czech Republic	Ukrainia	Choni ustojcivyj	persica
tch149	Czech Republic	Ukrainia	Krasnomjasyj	persica
tch150	Czech Republic	China	Man chenqxue tao	persica
tch151	Czech Republic	Romania	Negus	persica
tch152	Czech Republic	Ukrainia	Ostrakovskij Belyi	persica
tch153	Czech Republic	China	Qui mi	persica
tch154	Czech Republic	China	Rui guanq	persica
tch155	Czech Republic	Ukrainia	Sovetskij	persica
tch156	Czech Republic	Ukrainia	Tavrika 836-89	persica
tch157	Czech Republic	China	Zao lu pan tao	persica
tch158	Czech Republic	Ukrainia	Zlatna krizinka	persica
tch159	Czech Republic	Ukrainia	Zlatogor	persica
tch160	Czech Republic	Ukrainia	Zlatolistyj rannyj	persica
tch161	Czech Republic	USSR	Nikitskij	amygdalus
tch162	Czech Republic		W12	persica
tch163	Czech Republic		W13	persica
tch164	Czech Republic		Jing Ju	persica

tch165	Czech Republic		Wan M	persica	
tch166	Czech Republic		Cando2 plante1	persica	
tch167	Czech Republic		Cando2 plante2	persica	
tch168	Czech Republic		Cando2 plante3	persica	
tch169	Czech Republic			armeniaca	
tch170	Czech Republic			armeniaca	
turc 1	Turkey	Turkey - Malatya	Çöloğlu	armeniaca	
turc 2	Turkey	Turkey - Malatya	Hacıhaliloğlu	armeniaca	
turc 3	Turkey	Turkey - Iğdır	Şekerpare	armeniaca	
turc 4	Turkey	Turkey - Malatya	İsmailağa	armeniaca	
turc 5	Turkey	Turkey - Malatya	Hacıkız	armeniaca	
turc 6	Turkey	Turkey - Izmir	Alyanak	armeniaca	
turc 7	Turkey	Turkey - Bursa	Karacabey	armeniaca	
turc 8	Turkey	Turkey - Konya	Tokaloğlu(Konya-Ereğli)	armeniaca	
turc 9	Turkey	Turkey - Izmir	Ethembey	armeniaca	
turc 10	Turkey	Turkey - Izmir	Şam	armeniaca	
turc 11	Turkey	Turkey - Kars	Erken Erik	armeniaca	
turc 12	Turkey	Turkey - Iğdır	Aprikoz	armeniaca	
turc 13	Turkey	Turkey - Malatya	Yeğen	armeniaca	
turc 14	Turkey	Turkey - Mediterranean	Tekeler	armeniaca	
turc 15	Turkey	Turkey - Nevsehir	İri Bitirgen	armeniaca	
turc 16	Turkey	Turkey - Malatya	Turfanda (Eskimalatya)	armeniaca	
turc 17	Turkey	Turkey - Malatya	Paşa Mişmişi	armeniaca	
turc 18	Turkey	Turkey - Iğdır	Şekerpare (Iğdır)	armeniaca	
turc 19	Turkey	Turkey - Malatya	Kabaaşı	armeniaca	
turc 20	Turkey	Turkey - Yalova	Tokaloğlu (Yalova)	armeniaca	
turc 21	Turkey	Turkey - Erzincan	Tokaloğlu (Erzincan)	armeniaca	
turc 22	Turkey	Turkey - Malatya	Soğancı	armeniaca	
turc 23	Turkey	Turkey - Malatya	Kurukabuk	armeniaca	
turc 24	Turkey	Turkey - Malatya	Hasanbey	armeniaca	
turc 25	Turkey	Kemaliye		armeniaca	armeniaca
turc 26	Turkey	Akdamar island		armeniaca	armeniaca
turc 27	Turkey	Turkey - Adilcevaz		armeniaca	armeniaca
turc 28	Turkey	Turkey - Adilcevaz		armeniaca	armeniaca
turc 29	Turkey	Turkey - Adilcevaz		armeniaca	armeniaca
turc 30	Turkey	Turkey - Adilcevaz		armeniaca	armeniaca
turc 31	Turkey	Turkey - Adilcevaz		armeniaca	armeniaca
turc 32	Turkey	Turkey - Adilcevaz		armeniaca	armeniaca
turc 33	Turkey	Turkey - Ahlat		armeniaca	armeniaca
turc 34	Turkey	Turkey - Ahlat		armeniaca	armeniaca
turc 35	Turkey	Turkey - Ahlat		armeniaca	armeniaca
turc 36	Turkey	Turkey - Ahlat	Bayindir Kümbet	armeniaca	armeniaca
turc 37	Turkey	Turkey - Ahlat	Bayindir Kümbet	armeniaca	armeniaca
turc 38	Turkey	Turkey - Ahlat		armeniaca	armeniaca
turc 39	Turkey	Turkey - Ahlat		armeniaca	armeniaca
turc 40	Turkey	Turkey - Ahlat		armeniaca	armeniaca
turc 41	Turkey	Turkey - Arapgir		armeniaca	armeniaca
turc 42	Turkey	Turkey - Arapgir		armeniaca	armeniaca
turc 43	Turkey	Turkey - Arapgir		armeniaca	armeniaca
turc 44	Turkey	Turkey - Edremit		armeniaca	armeniaca
turc 45	Turkey	Turkey - Edremit		armeniaca	armeniaca
turc 46	Turkey	Turkey - Edremit		armeniaca	armeniaca
turc 47	Turkey	Turkey - Edremit		armeniaca	armeniaca
turc 48	Turkey	Turkey - Zerdali between Arapçirğ & Kemorliye		armeniaca	armeniaca
turc 49	Turkey	Turkey - Zerdali between Arapçirğ & Kemorliye		armeniaca	armeniaca
turc 50	Turkey	Turkey - Zerdali		armeniaca	armeniaca
turc 51	Turkey	Turkey - Zerdali		armeniaca	armeniaca
turc 52	Turkey	Turkey - Zerdali	Üzumlü	armeniaca	armeniaca
turc 53	Turkey	Turkey - Zerdali	Bayirbagi	armeniaca	armeniaca
turc 54	Turkey	Turkey - Zerdali	Bayirbagi	armeniaca	armeniaca
turc 55	Turkey	Turkey - Zerdali	Egü	armeniaca	armeniaca
turc 56	Turkey	Turkey - Zerdali		armeniaca	armeniaca
turc 57	Turkey	Turkey - Zerdali	Egü	armeniaca	armeniaca
turc 58	Turkey	Turkey - Zerdali	Bayirbagi	armeniaca	armeniaca
turc 59	Turkey	Turkey - Arapgir		armeniaca	armeniaca
turc 60	Turkey	Turkey - Naxçıvan	İnciaz Erigi	armeniaca	armeniaca
turc 61	Turkey	Turkey - Zerdali	Üzumlü	armeniaca	armeniaca

turc 62	Turkey	Turkey - Zerdali		armeniaca	armeniaca
turc 63	Turkey	Turkey - Zerdali		armeniaca	armeniaca
turc 64	Turkey	Turkey - Zerdali	Bayirbagi	armeniaca	armeniaca
turc 65	Turkey	Turkey - Zerdali	Üzümlü	armeniaca	armeniaca
turc 66	Turkey	Turkey - Zerdali	Üzümlü	armeniaca	armeniaca
turc 67	Turkey	Turkey - Sekit (Iskender)		armeniaca	armeniaca
turc 68	Turkey	Turkey - Sekit (Iskender)		armeniaca	armeniaca
turc 69	Turkey	Turkey - Sekit (Iskender)		armeniaca	armeniaca
turc 70	Turkey	Turkey - Sekit (Iskender)		armeniaca	armeniaca
turc 71	Turkey	Turkey - Sekit (Iskender)		armeniaca	armeniaca
turc 72	Turkey	Turkey - Sekit (Iskender)		armeniaca	armeniaca
turc 73	Turkey	Turkey - Sekit (Iskender)		armeniaca	armeniaca
turc 74	Turkey	Turkey - Malatya		armeniaca	armeniaca
turc 75	Turkey	Turkey - Malatya		armeniaca	armeniaca
turc 76	Turkey	Turkey - Malatya		armeniaca	armeniaca
turc 77	Turkey	Turkey - Kemaliye		armeniaca	armeniaca
turc 78	Turkey	Turkey - Sekit (Iskender)		cerasus	mahaleb
turc 79	Turkey	Turkey - Sekit (Iskender)		cerasus	mahaleb
turc 80	Turkey	Turkey - Sekit (Iskender)		cerasus	cerasifera?
turc 81	Turkey	Turkey - Kirikhan-Hassa	Sample #1-1 T1	amygdalus	amygdalus communis
turc 82	Turkey	Turkey - Kirikhan-Hassa	Sample #1-1 T2	amygdalus	amygdalus communis
turc 83	Turkey	Turkey - Kirikhan-Hassa	Sample #1-1 T3	amygdalus	amygdalus communis
turc 84	Turkey	Turkey - Kirikhan-Hassa	Sample #1-1 T4	amygdalus	amygdalus communis
turc 85	Turkey	Turkey - Kirikhan-Hassa	Sample #1-1 T5	amygdalus	amygdalus communis
turc 86	Turkey	Turkey - Kirikhan-Hassa	Sample #2-1	amygdalus	amygdalus communis
turc 87	Turkey	Turkey - Kirikhan-Hassa	Sample #2-2	amygdalus	amygdalus communis
turc 88	Turkey	Turkey - Kirikhan-Hassa	Sample #2-3	amygdalus	amygdalus communis
turc 89	Turkey	Turkey - Kirikhan-Hassa	Sample #2-4	amygdalus	amygdalus communis
turc 90	Turkey	Turkey - Kirikhan-Hassa	Sample #2-5	amygdalus	amygdalus communis
turc 91	Turkey	Turkey - Kirikhan-Hassa	Sample #3-1	amygdalus	amygdalus communis
turc 92	Turkey	Turkey - Kirikhan-Hassa	Sample #3-2	amygdalus	amygdalus communis
turc 93	Turkey	Turkey - Kirikhan-Hassa	Sample #3-3	amygdalus	amygdalus communis
turc 94	Turkey	Turkey - Kirikhan-Hassa	Sample #3-4	amygdalus	amygdalus communis
turc 95	Turkey	Turkey - Kirikhan-Hassa	Sample #3-5	amygdalus	amygdalus communis
turc 96	Turkey	Turkey - Hazar-Elazig	Sample #4-1	cerasus	mahaleb
turc 97	Turkey	Turkey - Hazar-Elazig	Sample #4-2	cerasus	mahaleb
turc 98	Turkey	Turkey - Hazar-Elazig	Sample #4-3	cerasus	mahaleb
turc 99	Turkey	Turkey - Hazar-Elazig	Sample #4-4	cerasus	mahaleb
turc 100	Turkey	Turkey - Hazar-Elazig	Sample #4-5	cerasus	mahaleb
turc 101	Turkey	Turkey - Hazar-Elazig	Sample #5-1	cerasus	avium (?)
turc 102	Turkey	Turkey - Hazar-Elazig	Sample #5-2	cerasus	avium (?)
turc 103	Turkey	Turkey - Hazar-Elazig	Sample #5-3	cerasus	avium (?)
turc 104	Turkey	Turkey - Hazar-Elazig	Sample #5-4	cerasus	avium (?)
turc 105	Turkey	Turkey - Hazar-Elazig	Sample #5-5	cerasus	avium (?)
turc 106	Turkey			amygdalus	dulcis
turc 107	Turkey			amygdalus	dulcis
turc 108	Turkey	Turkey - Arapgir		amygdalus	dulcis
turc 109	Turkey	Turkey - Arapgir		amygdalus	dulcis
turc 110	Turkey	Turkey - Arapgir		amygdalus	dulcis
turc 111	Turkey	Turkey - Zerdali between Arapcigr & Kemorliye		amygdalus	dulcis
turc 112	Turkey	Turkey - Pazarcik		amygdalus	amygdalus orientalis
turc 113	Turkey	Turkey - Pazarcik		amygdalus	amygdalus orientalis
turc 114	Turkey	Turkey - down Kemaliye to Erzincan		amygdalus	amygdalus orientalis
turc 115	Turkey	Turkey - down Kemaliye to Erzincan		amygdalus	amygdalus orientalis
turc 116	Turkey	Turkey - Sekit (Iskender)		cerasus	cerasifera
turc 117	Turkey		Egü	amygdalus	dulcis
turc 118	Turkey	Turkey - Kici Village		amygdalus	dulcis
turc 119	Turkey	Turkey - Akdamar island		amygdalus	dulcis
turc 120	Turkey	Turkey - Akdamar island		amygdalus	dulcis
turc 121	Turkey	Turkey - Akdamar island		amygdalus	dulcis
turc 122	Turkey	Turkey - Akdamar island		amygdalus	dulcis
turc 123	Turkey	Turkey - Akdamar island		amygdalus	dulcis
turc 124	Turkey	Turkey - Akdamar island		amygdalus	dulcis
turc 125	Turkey	Turkey - Akdamar island		amygdalus	dulcis
turc 126	Turkey	Turkey - Akdamar island		amygdalus	dulcis
turc 127	Turkey	Turkey - Akdamar island		amygdalus	dulcis
turc 128	Turkey	Turkey - Akdamar island		amygdalus	dulcis

turc 129	Turkey	Turkey - Akdamar island			amygdalus	dulcis
turc 130	Turkey	Turkey - Akdamar island			amygdalus	dulcis
turc 131	Turkey	Turkey - Akdamar island			amygdalus	dulcis
turc 132	Turkey	Turkey - Akdamar island			amygdalus	dulcis
turc 133	Turkey	Turkey - Akdamar island			amygdalus	dulcis
nk1	Ukrainia - Nikita garden			Ananasnyi Tsurupinskii	armeniaca	
nk2	Ukrainia - Nikita garden			Velkopavlovichka	armeniaca	
nk3	Ukrainia - Nikita garden			Vengerskii Krupnyi	armeniaca	
nk4	Ukrainia - Nikita garden			Krasnoshchekii	armeniaca	
nk5	Ukrainia - Nikita garden			Jubileinyi	armeniaca	
nk6	Ukrainia - Nikita garden			Alberge de Tur	armeniaca	
nk7	Ukrainia - Nikita garden			Tilton	armeniaca	
nk8	Ukrainia - Nikita garden			Luizet Krupnoplodnyi	armeniaca	
nk9	Ukrainia - Nikita garden			Kantsler	armeniaca	
nk10	Ukrainia - Nikita garden			Early Gold	armeniaca	
nk11	Ukrainia - Nikita garden			De Compot	armeniaca	
nk12	Ukrainia - Nikita garden			Precoco d'Italia	armeniaca	
nk13	Ukrainia - Nikita garden			Real d'Imola	armeniaca	
nk14	Ukrainia - Nikita garden			Vynoslivyi	armeniaca	
nk15	Ukrainia - Nikita garden			Bergeron	armeniaca	
nk16	Ukrainia - Nikita garden	Iran-Caucasian		Shalakh	armeniaca	
nk17	Ukrainia - Nikita garden			Vaagas Vardaguin	armeniaca	
nk18	Ukrainia - Nikita garden			Ordubad	armeniaca	
nk19	Ukrainia - Nikita garden			Katuni	armeniaca	
nk20	Ukrainia - Nikita garden			Nasera Tabris	armeniaca	
nk21	Ukrainia - Nikita garden			Kurbane Marache	armeniaca	
nk22	Ukrainia - Nikita garden	from		Quardi	armeniaca	
nk23	Ukrainia - Nikita garden			Shekarpara de Semnan	armeniaca	
nk24	Ukrainia - Nikita garden			Mascat	armeniaca	
nk25	Ukrainia - Nikita garden			Nakhichevanskii	armeniaca	
nk26	Ukrainia - Nikita garden	Chian		Da-chuan-che N1	armeniaca	
nk27	Ukrainia - Nikita garden			Da-chuan-che N2	armeniaca	
nk28	Ukrainia - Nikita garden			Yuan-sin	armeniaca	
nk29	Ukrainia - Nikita garden			Kitaiskii	armeniaca	
nk30	Ukrainia - Nikita garden			Shantunski	armeniaca	
nk31	Ukrainia - Nikita garden			Da-bei	armeniaca	
nk32	Ukrainia - Nikita garden			Mai-che-sin	armeniaca	
nk33	Ukrainia - Nikita garden			In-ben-sin	armeniaca	
nk34	Ukrainia - Nikita garden			Lao-yech-lian	armeniaca	
nk35	Ukrainia - Nikita garden			Pui-sha-sin	armeniaca	
nk36	Ukrainia - Nikita garden			Mi-bada	armeniaca	
nk37	Ukrainia - Nikita garden	Central Asian group		Samyi Rannii	armeniaca	
nk38	Ukrainia - Nikita garden			Kok-pshar	armeniaca	
nk39	Ukrainia - Nikita garden			Supkhani	armeniaca	
nk40	Ukrainia - Nikita garden	Fergana subgroup		Kandak-10	armeniaca	
nk41	Ukrainia - Nikita garden			Kandak-12	armeniaca	
nk42	Ukrainia - Nikita garden			Khurmai	armeniaca	
nk44	Ukrainia - Nikita garden			Kzyl Khurmai Kannibadam	armeniaca	
nk45	Ukrainia - Nikita garden			Oranzhevo-krasnyi	armeniaca	
nk46	Ukrainia - Nikita garden			Mirsandzhali	armeniaca	
nk47	Ukrainia - Nikita garden			Kolon Boboi	armeniaca	
nk48	Ukrainia - Nikita garden			Kzyl Uryuk	armeniaca	
nk49	Ukrainia - Nikita garden			Tadzhabai	armeniaca	
nk50	Ukrainia - Nikita garden	Khorezm subgroup		Nukul Citronnyi	armeniaca	
nk51	Ukrainia - Nikita garden			Kzyl Khorezmskii	armeniaca	
nk52	Ukrainia - Nikita garden			Paivandi Bukharskii	armeniaca	
nk53	Ukrainia - Nikita garden	Kopet-Dag subgroup		Lyuchak Sumbarskii	armeniaca	
nk54	Ukrainia - Nikita garden			KB-12	armeniaca	
nk55	Ukrainia - Nikita garden			B-1-11	armeniaca	
nk56	Ukrainia - Nikita garden			KB-9	armeniaca	
nk57	Ukrainia - Nikita garden			B-4-5	armeniaca	
nk58	Ukrainia - Nikita garden			B-5-3	armeniaca	
nk59	Ukrainia - Nikita garden			KK(2) N1	armeniaca	
nk60	Ukrainia - Nikita garden	Zeravshan subgroup		Arzami	armeniaca	
nk61	Ukrainia - Nikita garden			Gulyunghi	armeniaca	
nk62	Ukrainia - Nikita garden			Iskadari	armeniaca	
nk63	Ukrainia - Nikita garden			Rukhi Dzhuvanon Meona	armeniaca	
nk64	Ukrainia - Nikita garden			Rukhi Dzhuvanon Surkh	armeniaca	
nk65	Ukrainia - Nikita garden			Maftobi	armeniaca	

nk66	Ukrainia - Nikita garden		Badami	armeniaca	
nk67	Ukrainia - Nikita garden		Kunduzi	armeniaca	
nk68	Ukrainia - Nikita garden		Mamuri	armeniaca	
nk69	Ukrainia - Nikita garden		Zard	armeniaca	
nk70	Ukrainia - Nikita garden		Dzhungarskii 18/78	armeniaca	
nk71	Ukrainia - Nikita garden		Dzhungarskii 18/63	armeniaca	
nk72	Ukrainia - Nikita garden		Dzhungarskii 18/68	armeniaca	
nk73	Ukrainia - Nikita garden		Dzhungarskii 18/55	armeniaca	
nk74	Ukrainia - Nikita garden		Dzhungarskii 18/64	armeniaca	
nk75	Ukrainia - Nikita garden		Dzhungarskii 18/75	armeniaca	
nk76	Ukrainia - Nikita garden		Satser	armeniaca	
nk77	Ukrainia - Nikita garden		Krimskii Amur	armeniaca	
nk78	Ukrainia - Nikita garden		Lunnik	armeniaca	
nk79	Ukrainia - Nikita garden		Shedevr	armeniaca	
nk80	Ukrainia - Nikita garden		Olimp	armeniaca	
nk81	Ukrainia - Nikita garden		Parnas	armeniaca	
nk82	Ukrainia - Nikita garden		Naslazhdenije	armeniaca	
nk83	Ukrainia - Nikita garden		Dionis	armeniaca	
nk84	Ukrainia - Nikita garden		Medunets Krimskii	armeniaca	
nk85	Ukrainia - Nikita garden		Priusadebnyi Rannii	armeniaca	
nk86	Ukrainia - Nikita garden		Naryadnyi	armeniaca	
nk87	Ukrainia - Nikita garden		P. manshurica	armeniaca	
nk88	Ukrainia - Nikita garden		P. sibirica	armeniaca	
nk89	Ukrainia - Nikita garden		P. sibirica var davidiana	armeniaca	
nk90	Ukrainia - Nikita garden		P. mume, N 15	armeniaca	
nk91	Ukrainia - Nikita garden		P. mume, N18	armeniaca	
nk92	Ukrainia - Nikita garden		P. ansu	armeniaca	
nk93	Ukrainia - Nikita garden		P. brigantina	armeniaca	
nk94	Ukrainia - Nikita garden		P. brigantina x P. armeniaca (Olimp)	armeniaca	
nk95	Ukrainia - Nikita garden		P. brigantina x P. cerasifera (Pionerka)	armeniaca	
nk96	Ukrainia - Nikita garden		P. Davida, N 8 (peach)	armeniaca	
US1	USA - USDA		North Caucasus 5	persica	persica
US2	USA - USDA	USA	Wolf	prunus	americana
US3	USA - USDA	USA	Late Goose	prunus	musoniana
US4	USA - USDA			persica	kansuensis
US5	USA - USDA		North Caucasus 1	persica	persica
US6	USA - USDA	Mexico	Aguascalientes 12 - 12	persica	persica
US7	USA - USDA	Japan	Hakuto	persica	persica
US8	USA - USDA		Yellow Yunnan	persica	persica
US9	USA - USDA			armeniaca	brigantina
US10	USA - USDA	USA	NJ A44 Jerseycot	armeniaca	armeniaca
US11	USA - USDA	Iran	Seedling #5-15	amygdalus	dulcis
US12	USA - USDA	Spain	Tarragonna	amygdalus	dulcis
US13	USA - USDA	South Africa	Reubennel	prunus	salicina
US14	USA - USDA	USA		prunus	mexicana
US15	USA - USDA	Pakistani	Khubani	armeniaca	armeniaca
US16	USA - USDA	Pakistani	Kabuli	armeniaca	armeniaca
US17	USA - USDA	Pakistani	Badam Gakas	armeniaca	armeniaca
US18	USA - USDA	Pakistani	Bulbil-e-shikanda	armeniaca	armeniaca
US19	USA - USDA	Pakistani	Kartashi	armeniaca	armeniaca
US20	USA - USDA	Pakistani	Quropo	armeniaca	armeniaca
US21	USA - USDA	Pakistani	Dail Mesh	armeniaca	armeniaca
US22	USA - USDA	Pakistani	Dolato Ju	armeniaca	armeniaca
US23	USA - USDA	Pakistani	Garkmish	armeniaca	armeniaca
US24	USA - USDA	Pakistani	Gagai Tinani	armeniaca	armeniaca
US25	USA - USDA	Pakistani	Arghoon	armeniaca	armeniaca
US26	USA - USDA	Pakistani	Chaksa	armeniaca	armeniaca
US27	USA - USDA	Pakistani	Hashimpa	armeniaca	armeniaca
US28	USA - USDA	Pakistani	Khakas	armeniaca	armeniaca
US29	USA - USDA	Pakistani	Dolpa	armeniaca	armeniaca
US30	USA - USDA	Pakistani	Habiju	armeniaca	armeniaca
US31	USA - USDA	Pakistani	Shikanda	armeniaca	armeniaca
US32	USA - USDA	Pakistani	Soris	armeniaca	armeniaca
US33	USA - USDA	Pakistani	Shobaig	armeniaca	armeniaca
US34	USA - USDA	Pakistani	Paiwand	armeniaca	armeniaca
US35	USA - USDA	Pakistani	Badam	amygdalus	dulcis
US36	USA - USDA	Pakistani	Kaghzi	amygdalus	dulcis

US37	USA - USDA	Afghanistan	880739	amygdalus	dulcis
US38	USA - USDA	Afghanistan	Shakh-e-bugz	amygdalus	dulcis
US39	USA - USDA	Pakistani		amygdalus	kuramica
US40	USA - USDA	Pakistani	Gilgalo	persica	persica
US41	USA - USDA	Pakistani	880291	persica	persica
US42	USA - USDA	Pakistani	880329	persica	persica
US43	USA - USDA	Pakistani	880330	persica	persica
US44	USA - USDA	Pakistani	330332	persica	persica
US45	USA - USDA	Pakistani	Chutar	persica	persica
US46	USA - USDA	Pakistani	Chutar	persica	persica
US47	USA - USDA	Pakistani	Chugdar	persica	persica
US48	USA - USDA	Pakistani	Chalpachu	persica	persica
US49	USA - USDA	Pakistani	Churko	persica	persica
US50	USA - USDA	Pakistani	Hunshu	persica	persica
US51	USA - USDA	Pakistani	Khanda	persica	persica
US52	USA - USDA	Pakistani	Loimari	persica	persica
US53	USA - USDA	Pakistani	Lutkoo	persica	persica
US54	USA - USDA	Pakistani	Thulu	persica	persica
US55	USA - USDA	Pakistani	880471	persica	persica
US56	USA - USDA	Pakistani	Takashur I	persica	persica
US57	USA - USDA	USSR	Lola	persica	persica
US58	USA - USDA	Germany	Durkeimer Riesen	amygdalus	dulcis
US59	USA - USDA	Poland	Kijewska Zapala	persica	persica
US60	USA - USDA	Asian (Republic of Korea)	Yumyeong	persica	persica
US61	USA - USDA	Brazil	Cerrito	persica	persica
US62	USA - USDA	Brazil	Turquesa	persica	persica
US63	USA - USDA	Japan	Ouishi-nakate	prunus	salicina
US64	USA - USDA	USA	Patricia	prunus	maritima
US65	USA - USDA	USSR	Mahtoby	armeniaca	armeniaca
US66	USA - USDA	USSR	Hassan Krasni	armeniaca	armeniaca
US67	USA - USDA	USSR	USSR 90-02-02	armeniaca	manshurica
US68	USA - USDA		Yingjin Tao	persica	persica
US69	USA - USDA	Romania	Ardechoise	amygdalus	dulcis
US70	USA - USDA	Central Asian (Uzbekistan)	Tashkent Gold	persica	persica
US71	USA - USDA			armeniaca	fremontii
US72	USA - USDA	USA	#1	cerasus	virginiana
US73	USA - USDA	Kazakhstan		amygdalus	petunnikowii
US74	USA - USDA	China		persica	mira
US75	USA - USDA	Canada		prunus	americana
US76	USA - USDA	Nepal	1-125	persica	persica
US77	USA - USDA	Kazakhstan		armeniaca	armeniaca
US78	USA - USDA	Kazakhstan		armeniaca	armeniaca
US79	USA - USDA	China	96077	armeniaca	armeniaca
US80	USA - USDA	Mongolia	E 94003	amygdalus	manshurica
US81	USA - USDA	Canada	Vivid	persica	petunculata
US82	USA - USDA	Canada	Vulcan	persica	persica
US83	USA - USDA	South Africa	Albatros	persica	persica
US84	USA - USDA	Yugoslavia	Cacak's Gold	armeniaca	armeniaca
US85	USA - USDA	South Africa	Orion	persica	persica
US86	USA - USDA	Canada	Harrow Diamond	persica	persica
US87	USA - USDA	USA	Nugget	armeniaca	armeniaca
US88	USA - USDA	Latvia	Lavinia	prunus	americana
US89	USA - USDA	Taiwan	Charngterng	armeniaca	mume
US90	USA - USDA	Turkmenistan	A. spinossisma bunge	amygdalus	dulcis
US91	USA - USDA	India		prunus	salicina
US92	USA - USDA	China	Shanxi	persica	davidiana
US93	USA - USDA	China		persica	ferganensis
US94	USA - USDA	India	Kinnauri	persica	persica
US95	USA - USDA	India	IC 20841	persica	persica
US96	USA - USDA	France	Sanguine de Chateauneuf	persica	persica
US97	USA - USDA	India	IC 20089	armeniaca	armeniaca
US98	USA - USDA	Turkmenistan		amygdalus	scoparia
US99	USA - USDA	China		persica	mira
US100	USA - USDA	Central Asian (Turkmenistan)	Birleshik 14	armeniaca	armeniaca
US101	USA - USDA	Central Asian (Turkmenistan)	Germab-5	armeniaca	armeniaca
US102	USA - USDA	China		cerasus	cerasoides
US103	USA - USDA	China	Fei Cheng Hong Li #6	persica	persica

US104	USA - USDA	China	12-28 OP	persica	persica
US105	USA - USDA	China	wild peach	persica	davidiana
US106	USA - USDA	Russia		cerasus	pensylvanica
US107	USA - USDA	USA	Emerich # 1	cerasus	serotina
US108	USA - USDA	Japan	Yanmei	armeniaca	mume
US109	USA - USDA	Armenia		amygdalus	fenzliana
US110	USA - USDA	China	Sweet Seeded	armeniaca	armeniaca
US111	USA - USDA	China	Sweet Seeded	armeniaca	armeniaca
us112	USA - USDA		F8 15-38	amygdalus	webbii
us113	USA - USDA	United States	Vesta	amygdalus	dulcis
us114	USA - USDA		Languedoc	amygdalus	dulcis
us115	USA - USDA	Japan	Hann Almond	amygdalus	hybrid
us116	USA - USDA	Afghanistan	Abdul Wahdi	amygdalus	dulcis
us117	USA - USDA	Turkey		amygdalus	dulcis
us118	USA - USDA	Unknown	Ukrainische Griotte	cerasus	avium
us119	USA - USDA	Romania	H-bristrita XXX/1-4	cerasus	avium
us120	USA - USDA	USSR		cerasus	bifrons
us121	USA - USDA		Munchebergi Korai	cerasus	avium
us122	USA - USDA		Mildew Immune Mazzard #13	cerasus	avium
us123	USA - USDA		Persian	cerasus	avium
us124	USA - USDA	Japan	Sato Nishiki	cerasus	avium
us125	USA - USDA	Japan	Tsukuba #1	cerasus	japonica
us126	USA - USDA	Afghanistan		amygdalus	species
us127	USA - USDA		USSR 90-09-01	amygdalus	bucharica
us128	USA - USDA		USSR 90-16-12	amygdalus	species
us129	USA - USDA	Nepal	1-112	amygdalus	dulcis
us130	USA - USDA	Nepal	1-147	amygdalus	dulcis
us131	USA - USDA	Nepal	1-104	amygdalus	species
us132	USA - USDA	Romania	De Dioso	amygdalus	dulcis
us133	USA - USDA	Turkmenistan		amygdalus	dulcis
us134	USA - USDA	Turkmenistan		amygdalus	scoparia
us135	USA - USDA	Kazakhstan		amygdalus	tenella
us136	USA - USDA	Kazakhstan		amygdalus	spinossissima
us137	USA - USDA	Canada	GR #6414	amygdalus	tenella
us138	USA - USDA	Italy	Fascionello K	amygdalus	dulcis
us139	USA - USDA	Romania	Mollesse	amygdalus	dulcis
us140	USA - USDA		Tuono	amygdalus	dulcis
us141	USA - USDA	China	Flowering Almond	amygdalus	triloba
us142	USA - USDA	Kazakhstan	Aug. 31 collect	amygdalus	dulcis
us143	USA - USDA	Mongolia	E 94003	amygdalus	pedunculata
us144	USA - USDA	Mongolia	E 94027	amygdalus	pedunculata
us145	USA - USDA	China		amygdalus	tangutica
us146	USA - USDA	China	Eagle's Beak	amygdalus	dulcis
us147	USA - USDA	China	Paper Shell	amygdalus	dulcis
us148	USA - USDA	China	Multiple Fruit	amygdalus	dulcis
us149	USA - USDA	China	Rough Shell	amygdalus	dulcis
us150	USA - USDA	Czechoslovakia	VA 5/8	amygdalus	dulcis
us151	USA - USDA	Hungary	Tetenyi Rekord	amygdalus	dulcis
us152	USA - USDA	Iran		amygdalus	dulcis
us153	USA - USDA	Unknown	Balaton	amygdalus	dulcis
us154	USA - USDA	Uzbekistan	Unknown	amygdalus	dulcis
us155	USA - USDA	Malta		amygdalus	dulcis
us156	USA - USDA	Turkmenistan	Ai-Dere-149	amygdalus	dulcis
us157	USA - USDA	Turkmenistan	Karakalinskii-30	amygdalus	dulcis
us158	USA - USDA	Turkmenistan	Purnuar-18	amygdalus	dulcis
us159	USA - USDA	Turkmenistan	Turkmenskii Otlchitel	amygdalus	dulcis
us160	USA - USDA	USA	Jefferys	amygdalus	dulcis
us161	USA - USDA			persica	persica
us162	USA - USDA	Turkey		cerasus	mahaleb
us163	USA - USDA		Fei Cheng HongLi #6 OP	persica	persica
us164	USA - USDA	Japan	amagi-yoshino	cerasus	yedoensis
Sa1	Lesotho			persica	
Sa2	Lesotho			persica	
Sa3	Lesotho			persica	
Sa4	Lesotho			persica	
Sa5	Lesotho			persica	
Sa6	Lesotho			armeniaca	
Sa7	Lesotho			armeniaca	