



The Minister of Agriculture, Food and Forestry Policies

Having regard to the Ministerial Decree of 14 April 1997 published in Supplement no. 112 to the *Official Journal* of the Italian Republic no. 126 of 2 June 1997, transposing the Commission Directives no. 93/48/EEC of 23 June 1993, no. 93/64/EEC of 5 July 1993 and no. 93/79/EEC of 21 September 1993, marketing of fruit plant propagating material and fruit plants intended for fruit production;

Having regard to the Ministerial Decree of 24 July 2003 published in the *Official Journal* of the Italian Republic, general series, no. 240 (*Gazzetta Ufficiale della Repubblica italiana*, serie generale, n. 240) of 15 October 2003 organising the national (Italian) service for voluntary certification of fruit plant propagating material;

Having regard to the Legislative Decree no. 214 of 19 August 2005 published in Supplement no. 169/L to the *Official Journal* of the Italian Republic no. 248 of 24 October 2005 on the implementation of Directive 2002/29/EC on protective measures against the introduction and spread into the Community of organisms harmful to plants or plant products;

Having regard to the Ministerial Decree of 4 May 2006, published in the *Official Journal* of the Italian Republic, general series, no. 168 of 21 July 2006 releasing general provisions for the production of propagating material of fruit plants and shrubs as well as for agamically-propagated herbaceous species;

Having identified the opportunity of laying down special provisions for the production of certified plant propagating material of Stone fruits ;

Having regard to the proposal about the technical protocols for the production of certified propagating material of Stone fruits approved by the National (Italian) Certification Committee (Comitato nazionale per la certificazione) in the session held on 15 and 16 June 2006, in accordance with Article 3 of the Ministerial Decree of 24 July 2003;

Having received the favourable opinion of the Phytosanitary Committee referred to in Article 52 of the Legislative Decree no. 214 of 19 August 2005, in accordance with Article 11 of the Ministerial Decree of 4 May 2006, at the meeting held on 18 July 2006;

Orders:

Article 1

Subject

1. The rules set forth in this Decree apply to certification of propagating material of the fruit plants listed below as well as their rootstocks even if of a different species or hybrids:



The Minister of Agriculture, Food and Forestry Policies

- Apricot (*Prunus armeniaca* L.);
- Cherry (*P. avium* L, *P. mahaleb* and *P. cerasus* L.);
- Almond (*P. amygdalus* Batsch.);
- Peach (*P. persica* L.);
- Plum (*P. domestica* L., *P. salicina* Lindl., *P. cerasifera* Ehrh, *P. triflora* Roxb and their hybrids);

other *Prunus* spp. and their hybrids of interest to agriculture.

2. For the purposes of this decree, the Ministerial Decree of 4 May 2006, mentioned in the premises, will be hereinafter referred to as the "decree".

Article 2

Registration of Primary Sources

1. For the registration of Primary sources with the National (Italian) Certification Service, the plant breeder must fulfil the obligations set forth in Article 13 of the Ministerial Decree of 24 July 2003 and Article 2 of the “decree”. The pomological data sheet and phytosanitary data sheet must be prepared according to the patterns in Annex 1 of this decree.

2. For the registration of new cultivars, the pomological data sheet must comply with that provided for in UPOV or CPVO protocols.

3. New selections are allowed in the Conservation and Pre-multiplication steps, provided that they comply with the phytosanitary characteristics required and that there exists a genetic description distinguishing them from existing varieties.

Article 3

Means and Facilities

1. Means and facilities necessary to *in vivo* conservation and production of “Pre-basic” and “Basic” propagating material referred to in Article 4 and 5 of the “decree”, must meet the requirements listed in Annex 2 of this decree.

2. Means and facilities necessary to *in vivo* growing and production of “Certified” propagating material referred to in Article 6 of the “decree”, must meet the requirements listed in Annex 3 of this decree.

3. Means, facilities and modes necessary to *in vitro* production of “Pre-basic”, “Basic” and “Certified” propagating material referred to in Article 7 of the “decree”, must meet the requirements listed in Annex 4 of this decree.

Article 4

Certification of Propagating Material



The Minister of Agriculture, Food and Forestry Policies

1. Pursuant to Article 11 of the Ministerial Decree of 24 July 2003, for the purposes of the issuance of certification of nursery productions according to Article 12 of the Ministerial Decree of 24 July 2003 and Article 8 of the “decree”, “Pre-basic”, “Basic” and “Certified” propagating material which is virus-free (VF) or virus-tested (VT), must be free from the diseases and pathogens listed in Annex 5 of this decree.

Article 5

Tests and Controls

1. “Pre-basic, “Basic” and “Certified” propagating material must be subjected to phytosanitary controls and tests and genetic trueness-to-type checks as referred to in Article 5.2, (b) of the Ministerial Decree of 24 July 2003, and in Articles 4.3, 5.3 and 6.4 of the “decree”, as provided for in Annexes 6 and 7 of this decree.

Article 6

Provisional Regulations

1. Until 31 December 2011, propagating material belonging to Stone fruits, even if not compliant with this decree, provided that it derives from primary sources included in the National or Regional Certification programmes and already existing at the time of entry into force of this decree, is admitted to national (Italian) certification.

This decree is sent to the Supervisory body for registration and will enter into force the day after its publication in the *Official Journal* of the Italian Republic.

Rome, 20 November 2006

The Minister: De Castro

DATA SHEETS FOR THE REGISTRATION OF THE STONE FRUITS PRIMARY SOURCE

Part I – Variety checks and Pomological Data Sheet

I.A Trueness-to-type checks

Genus: **Species:** **Cultivar:** **Clone:**

Ecotype found:

Type of plant: in pot outdoors

Growing conditions: screenhouse outdoors

Type of rootstocks: self-rooted plant

Plant breeder:

Selected ecotype:

Observation reference years:

I.B Pomological data sheet

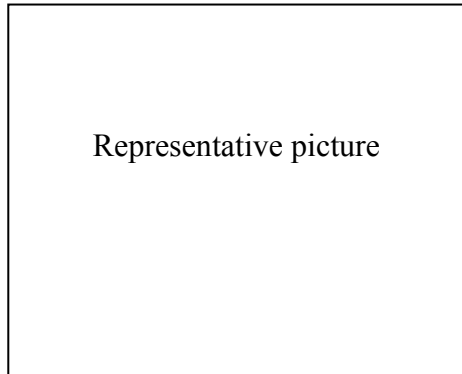
Tree: **Habit:**

Blooming date:

Fruit:

Harvesting time:

Ripening time:



Representative picture

Productivity:

Observations at:

Primary source:

Conservation:

Belonging to GMO

YES

NO

Molecular characterisation

Year: _____ Laboratory: _____

Molecular Markers	Number of combinations per Primer or enzyme systems	Bibliographic reference
<input type="checkbox"/> SSR		
<input type="checkbox"/> AFLP		
<input type="checkbox"/> Isozymes:		
<input type="checkbox"/> Other		

Tick if compliant

Pomological characterisation:

According to UPOV or CPVO (www.cpvo.europa.eu) standards

Conservation of the Primary Source:

.....
(Responsible body)

.....
(Location)

Date

The Laboratory Manager

Part II – Testing protocols for plant health assessment

II.A. Apricot							
Causal agent / Disease	Acronym	Biological assays (woody indicators) **		Microscopic / Serological tests		Biomolecular tests	
		+ Greenhouse -	+ Field -	+ -	+ -		
VIRUSES							
<i>Apple mosaic virus</i>	ApMV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>P. armeniaca</i> Priana <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Apple chlorotic leaf spot virus</i>	ACLSV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>P. armeniaca</i> Priana <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Prunus necrotic ring spot virus</i>	PNRSV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		

<i>Prune dwarf virus</i>	PDV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen	<input type="checkbox"/> ELISA	<input type="checkbox"/> RT-PCR <input type="checkbox"/> Hybridisation
<i>Plum bark necrosis stem pitting – associated virus</i>	PBNSPaV				<input type="checkbox"/> RT-PCR <input type="checkbox"/> Hybridisation
<i>Apricot latent virus</i>	ALV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <i>P. armeniaca</i> Priana		<input type="checkbox"/> RT-PCR <input type="checkbox"/> Hybridisation
<i>Plum pox virus</i>	PPV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <i>P. armeniaca</i> Priana	<input type="checkbox"/> ELISA	<input type="checkbox"/> RT-PCR <input type="checkbox"/> Hybridisation
VIROIDS					
<i>Hop stunt viroid</i>	HSVd				<input type="checkbox"/> RT-PCR <input type="checkbox"/> Hybridisation
PHYTOPLASMAS					
European stone fruit yellows phytoplasma <i>Candidatus</i> phytoplasma prunorum	ESFYP	<input type="checkbox"/> <i>Prunus persicae</i> GF305	<input type="checkbox"/> <i>P. armeniaca</i> Priana	<input type="checkbox"/> DAPI	<input type="checkbox"/> PCR
FUNGI			ISOLATION		YEAR/S
			Result		
			+	-	
<i>Verticillium dahliae</i> <i>Chondrostereum purpureum</i> <i>Armillaria mellea</i> <i>Rosellinia necatrix</i>					
BACTERIA		Microbiological tests	Serological tests	Biomolecular tests	
		Test result	Test result	Test result	
		+	-	+	-
Crown gall <i>Agrobacterium tumefaciens</i>	<i>A.t.</i>				

tick the box of the test performed

HEALTH STATUS: **Virus-free VF** **Virus-tested VT**

Date

The Laboratory Manager

II.B. Cherry							
Causal agent / Disease	Acronym	Biological assays (woody indicators)		Microscopic / Serological tests		Biomoleculark tests	
		+ Greenhouse -	+ Field -	+ -	+ -	+ -	
VIRUSES							
<i>Apple mosaic virus</i>	ApMV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Apple chlorotic leaf spot virus</i>	ACLSV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Prunus necrotic ring spot virus</i>	PNRSV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Prune dwarf virus</i>	PDV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Plum pox virus</i>	PPV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>P. armeniaca</i> Priana <input type="checkbox"/>	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Arabis mosaic virus</i>	ArMV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus avium</i> Bing <input type="checkbox"/> <input type="checkbox"/> <i>P. Persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Cherry leaf roll virus</i>	CLRV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus avium</i> Bing <input type="checkbox"/> <input type="checkbox"/> <i>P. Persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Cherry rasp leaf virus</i>	CRLV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus avium</i> Bing <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Raspberry ringspot virus</i>	RRSV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus avium</i> Bing <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/>		
<i>Strawberry latent ringspot virus</i>	SLRSV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus avium</i> Bing <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Tomato black ring virus</i>	TBRV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>		<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Cherry green ring mottle virus</i>	CGRMV	<input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>		<input type="checkbox"/> RT-PCR <input type="checkbox"/>		
<i>Little cherry virus 1</i>	LChV-1	<input type="checkbox"/> <i>Prunus avium</i> Canindex I <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus avium</i> Sam or Canindex I <input type="checkbox"/>		<input type="checkbox"/> RT-PCR <input type="checkbox"/>		
<i>Little cherry virus 2</i>	LChV-2	<input type="checkbox"/> <i>Prunus avium</i> Canindex I <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus avium</i> Sam or Canindex I <input type="checkbox"/>		<input type="checkbox"/> RT-PCR <input type="checkbox"/>		
<i>Cherry necrotic rusty mottle virus</i>	CRMV	<input type="checkbox"/> <i>Prunus avium</i> Sam or Bing <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus avium</i> Sam or Bing <input type="checkbox"/>		<input type="checkbox"/> RT-PCR <input type="checkbox"/>		

<i>Plum bark necrosis stem pitting – associated virus</i>	PBNSPaV				<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>American plum line pattern virus</i>	APLPV	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta <input type="checkbox"/> <i>P. armeniaca</i> Priana <input type="checkbox"/>	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>

(II.B. Cherry continued)

(II.B. Cherry to be continued)

Causal agent / Disease	Acronym	Biological assays (woody indicators)		Microscopic/ Serological Tests		Biomolecular Tests	
		+ Greenhouse -	+ Field-	+ -	+ -		
VIRUS-LIKE AGENTS							
Rusty mottle (European)	CRM	<input type="checkbox"/> <i>Prunus avium</i> <input type="checkbox"/> Sam or Bing	<input type="checkbox"/> <i>Prunus avium</i> <input type="checkbox"/> Sam or Bing				
FUNGI		ISOLATION		YEAR /S			
		Result					
		+ -					
<i>Verticillium dahliae</i> <i>Chondrostereum purpureum</i> <i>Armillaria mellea</i> <i>Rosellinia necatrix</i>							
BACTERIA		Microbiological tests	Serological tests	Biomolecular tests			
		Test result	Test result	Test result			
		+ -	+ -	+ -			
Crown gall <i>Agrobacterium tumefaciens</i>	<i>A.t.</i>						

tick the box of the test performed

HEALTH STATUS: **Virus-free VF** **Virus-tested VT**

Date

The Laboratory Manager

II.C. Almond							
Causal agent / Disease	Acronym	Biological assays (woody indicators)		Microscopic / Serological Tests		Biomolecular Tests	
		+ Greenhouse -	+ Field -	+	-	+	-
VIRUSES							
<i>Apple mosaic virus</i>	ApMV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>		<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>	
<i>Apple chlorotic leaf spot virus</i>	ACLSV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>		<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>	
<i>Prunus necrotic ring spot virus</i>	PNRSV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>		<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>	
<i>Prune dwarf virus</i>	PDV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>		<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>	
<i>Plum bark necrosis stem pitting – associated virus</i>	PBNSPaV					<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>	
FUNGI			ISOLATION		YEAR/S		
			Result				
			+	-			
<i>Verticillium dahliae</i> <i>Chondrostereum purpureum</i> <i>Armillaria mellea</i> <i>Rosellinia necatrix</i>							
BACTERIA		Microbiological tests		Serological tests		Biomolecular tests	
		Test result		Test result		Test result	
		+	-	+	-	+	-
<i>Crown gall</i> <i>Agrobacterium tumefaciens</i>	<i>A.t.</i>						

tick the box of the test performed

HEALTH STATUS: **Virus-free VF** **Virus-tested VT**

Date

The Laboratory Responsible Manager

II.D. Peach							
Causal agent / Disease	Acronym	Biological assays (woody indicators)		Microscopic/ Serological Tests		Biomolecular Tests	
		+ Greenhouse -	+ Field-	+ -	+ -		
VIRUSES							
<i>Apple mosaic virus</i>	ApMV	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Apple chlorotic leaf spot virus</i>	ACLSV	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Prunus necrotic ring spot virus</i>	PNRSV	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta <input type="checkbox"/> <i>Prunus serrulata</i> <input type="checkbox"/> cv. Kwanzan or Shirofugen	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta <input type="checkbox"/> <i>Prunus serrulata</i> <input type="checkbox"/> cv. Kwanzan or hirofugen	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Prune dwarf virus</i>	PDV	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta <input type="checkbox"/> <i>Prunus serrulata</i> <input type="checkbox"/> cv. Kwanzan or Shirofugen	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta <input type="checkbox"/> <i>Prunus serrulata</i> <input type="checkbox"/> cv. Kwanzan or Shirofugen	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>		
<i>Cherry green ring mottle virus</i>	CGRMV	<input type="checkbox"/> <i>Prunus serrulata</i> <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus serrulata</i> <input type="checkbox"/>		<input type="checkbox"/> RT-PCR <input type="checkbox"/>		

		cv. Kwanzan or Shirofugen	cv. Kwanzan or Shirofugen		<input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Tomato black ring virus</i>	TBRV	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta		<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Strawberry latent ringspot virus</i>	SLRSV	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Plum pox virus</i>	PPV	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Plum bark necrosis stem pitting – associated virus</i>	PBNSPaV				<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Apricot latent virus</i>	ALV	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta <input type="checkbox"/> <i>P. armeniaca</i> Priana <input type="checkbox"/>		<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>American plum line pattern virus</i>	APLPV	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 or Elberta <input type="checkbox"/> <i>P. armeniaca</i> Priana <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> <input type="checkbox"/> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
PHYTOPLASMAS					
European stone fruit yellows phytoplasma <i>Candidatus</i> phytoplasma prunorum	AP	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> <i>P. armeniaca</i> Priana <input type="checkbox"/>	<input type="checkbox"/> DAPI <input type="checkbox"/>	<input type="checkbox"/> PCR <input type="checkbox"/>
VIROIDS					
<i>Peach latent mosaic viroid</i>	PLMVd				<input type="checkbox"/> Hybridisation <input type="checkbox"/> <input type="checkbox"/> RT-PCR <input type="checkbox"/>
<i>Hop stunt viroid</i>	HSVd				<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>

(II.D. Peach to be continued)

(II.D. Peach continued)

Causal agent/ Disease	Acronym	Biological assays (woody indicators)				Microscopic/ / Serological		Biomolecular tests	
		+ Greenhouse -	+ Field -	+ -	+ -	+ -	+ -		
FUNGI		ISOLATION				YEAR/S			
		Result							
		+	-	+	-				
<i>Verticillium dahliae</i> <i>Chondrostereum purpureum</i> <i>Armillaria mellea</i> <i>Rosellinia necatrix</i>									
BACTERIA		Microbiologic Tests		Serological Tests		Biomolecular Tests			
		Test result		Test result		Test result			
		+	-	+	-	+	-	+	-
Crown gall <i>Agrobacterium tumefaciens</i>	<i>A.t.</i>								

tick the box of the test performed

HEALTH STATUS: **Virus-free VF** **Virus-tested VT**

Date

The Laboratory Responsible Manager

II.E. Plum					
Causal agent /Disease	Acronym	Biological assays (woody indicators)		Microscopic/Serological Tests	
		+ Greenhouse -	+ Field -	+ -	+ -
VIRUSES					
<i>Apple mosaic virus</i>	ApMV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Apple chlorotic leaf spot virus</i>	ACLSV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Prunus necrotic ring spot virus</i>	PNRSV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Prune dwarf virus</i>	PDV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>Prunus serrulata</i> cv. Kwanzan or Shirofugen <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Mirabolan latent ring spot virus</i>	MLRSV	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Plum pox virus</i>	PPV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>Plum bark necrosis stem pitting - associated virus</i>	PBNaV				<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
<i>American plum line pattern virus</i>	APLPV	<input type="checkbox"/> <i>Prunus persicae</i> GF305 or Elberta <input type="checkbox"/> <input type="checkbox"/> <i>P. armeniaca</i> Priana <input type="checkbox"/>	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> ELISA <input type="checkbox"/>	<input type="checkbox"/> RT-PCR <input type="checkbox"/> <input type="checkbox"/> Hybridisation <input type="checkbox"/>
PHYTOPLASMAS					
European stone fruit yellows phytoplasma <i>Candidatus phytoplasma prunorum</i>	AP	<input type="checkbox"/> <i>P. persicae</i> GF305 <input type="checkbox"/>	<input type="checkbox"/> <i>Prunus armeniaca</i> cv. Luizet or Priana <input type="checkbox"/>	<input type="checkbox"/> DAPI <input type="checkbox"/>	<input type="checkbox"/> PCR <input type="checkbox"/>
VIROIDS					
<i>Hop stunt viroid</i>	HSVd				<input type="checkbox"/> Hybridisation <input type="checkbox"/> <input type="checkbox"/> RT-PCR <input type="checkbox"/>

FUNGI		ISOLATION		YEAR/S			
		Result					
		+	-				
<i>Verticillium dahliae</i>							
<i>Chondrostereum purpureum</i>							
<i>Armillaria mellea</i>							
<i>Rosellinia necatrix</i>							
BACTERIA		Microbiological Tests		Serological Tests		Biomolecular Tests	
		Test result		Test result		Test result	
		+	-	+	-	+	-
Crown gall	<i>A.t.</i>						
<i>Agrobacterium tumefaciens</i>							

tick the box of the test performed

HEALTH STATUS: Virus-free VF Virus-tested VT

Date

The Laboratory Manager

*MEANS FOR IN VIVO GROWING AND PRODUCTION OF
“PRE-BASIC” and “BASIC” MATERIAL*

Facilities

The Conservation for Pre-multiplication and Pre-multiplication steps shall be carried out in an insect-proof screenhouse. The screenhouse size shall allow the proper development of plants proportioned to the container volume; moreover, the following requirements shall be fulfilled:

- a. hard roof and walls with a double 20/10 mesh (20 wires/cm warp and 10 wires/cm weft) net and entrance with double-net walls and double door;
- b. isolation from surface water flow through a kerb or a similar isolating structure, declared appropriate by the locally competent Regional Phytosanitary Service;
- c. a French drain, all around the greenhouse, at least 80 cm wide and at least 20 cm deeper than the inside flooring;
- d. isolation of growing containers from the ground or the flooring by:
 - i. a suitably designed French drain covered with fine gravel or any inert material providing for effective drainage;
 - ii. a layer of concrete or different material. In such a case containers, flats for seedling beds and acclimatation benches shall be kept on supports at least 20cm high off the ground;
- e. plants with a different health status (Virus-free VF and Virus-tested VT) may be grown under the same screenhouse provided that they are isolated by a double net.

Growing and production

- a. “Pre-basic” and “Basic” material shall be maintained and propagated in a screenhouse and grown in containers of appropriate volume;
- b. when the plants are brought in, they shall be numbered on the spot, in a progressive order and in an indelible fashion;
- c. the soil or growing medium shall be found free from the nematodes *Longidorus elongatus*, *L. attenuatus*, *L. macrosoma*, *Xiphinema diversicaudatum*, *X. rivesi* and from the fungi *Verticillium dahliae* and *Chondrostereum purpureum*; freedom from the above shall be substantiated by an official document;
- d. “Basic” mother plants shall not be kept for more than 20 years after they have been brought into the screenhouse, unless otherwise provided by the competent Regional Plant Protection Service;
- e. the containers and flats for rooting, acclimatisation and seedling beds shall be kept at 20 cm at least off the ground;
- f. before use, the containers and flats for rooting, acclimatisation and seedling beds shall be disinfected with a 2% sodium hypochlorite solution for at least 20/30 minutes;

- g. any delivery of material by the Pre-multiplication Centre (PC) shall be at all times recorded and immediately notified (by fax and/or email) to the locally competent Regional Phytosanitary Service and to the relevant Pytosanitary Service of the final user;
- h. records shall be kept of all operations in a special Farm Book;
- i. implements shall be at all times disinfected with a 10% sodium hypochlorite solution between cuttings.

ANNEX 3

MEANS FOR IN VIVO GROWING OF MOTHER PLANTS AND PRODUCTION OF “CERTIFIED” MATERIAL

Part I - Mother Plant Blocks (MPB)

Scion Mother Plant (ScMP) and Seed Mother Plant (SMP) blocks shall meet the following requirements:

- a. they shall be located in areas declared suitable by the locally competent Regional Phytosanitary Service, found free from Sharka (Plum Pox Virus) foci and from other quarantine pests;
- b. they shall be established on suitable soils which fulfil the normal agronomic and health requirements and found free from the nematodes *Longidorus elongatus*, *L. attenuatus*, *L. macrosoma*, *Xiphinema diversicaudatum* and *X. rivesi*, and from the fungi *Verticillium dahliae* and *Chondrostereum purpureum*; freedom from the above shall be substantiated by an official document;
- c. they shall be established on soils on which none of the tree crops have been grown for at least 5 years;
- d. they shall be established in isolated areas or separated from any stone fruit trees by a distance of:
 - i. 600m, for cherry and Mahaleb seed mother plants (SMP);
 - ii. 300m for almond, apricot, peach and plum seed mother plants (SMP);
 - iii. 200m for scion mother plants (SMP),unless the locally competent Phytosanitary Service provides more stringent instructions;
- e. moreover, stool bed mother plants shall be established on soils found free from *Agrobacterium tumefaciens*; freedom from the above shall be substantiated by an official document;
- f. mother plant blocks shall be separated by a surrounding zone 10m wide; the locally competent regional Phytosanitary Service can otherwise reduce this limit provided that the neighbouring plantings are found free from the aforementioned nematodes or in case special protective barriers are created (e.g. ditches, furrows, etc.);
- g. they shall be isolated from surface water flow;
- h. irrigation water shall be found free or cleaned up from harmful organisms as set out by the Community Directive on the marketing of fruit plants (MD of 14 April 1997) and specified in the technical annexes of the present decree; freedom from the above shall be substantiated by an official document;
- i. the planting distance shall be proportioned so as to allow that the normal cultural operations and the relating checks;
- j. plants shall be numbered on the spot, in a progressive order and in an indelible fashion;
- k. in the plot, the rows shall be complete and distinct per plant accession; if different accessions are grown in the same row, they shall be separated by a double inter-space;
- l. scion mother plants (ScMP) shall not be kept for more than 15 years since their establishment;

- m. seed mother plants (SMP) shall not be kept for more than 18 years since their establishment;
- n. mother plants for stool bed rootstocks shall not be kept for more than 15 years since their establishment;
- o. the blocks shall be kept under continuous surveillance to control pathogens, pests and weeds;
- p. implements shall be at all times disinfected with a 10% sodium hypochlorite solution between cuttings.

Part II- Nurseries (Seedling, Rootling, Sapling beds and rooting and acclimatation facilities)

- a. Certifiable plant nurseries shall be located in areas declared suitable by the locally competent Regional Phytosanitary Service, found free from Sharka (Plum Pox Virus) foci and from other quarantine pests, unless otherwise provided by the Phytosanitary Service;
- b. the planting shall be established in plots found free from, *Armillaria mellea*, *Rosellinia necatrix* and *Agrobacterium tumefaciens*;
- c. the soil or growing medium shall be found free from the nematodes *Longidorus elongatus*, *L. attenuatus*, *L. macrosoma*, *Xiphinema diversicaudatum*, *X. rivesi*, *Meloidogyne arenaria*, *M. incognita*, *M. javanica*, *Pratylenchus penetrans*, *P. vulnus* and from the fungi *Verticillium dahliae* and *Chondrostereum purpureum*; freedom from the above shall be substantiated by an official document;
- d. the planting shall be established on soils on which none of the tree crops have been grown for at least 2 years;
- e. the planting shall be at least 100m apart from any stone fruit orchards; such a limit can be reduced to 20m, following the phytosanitary check by the competent Phytosanitary Service;
- f. the planting shall be at least 2m apart from contiguous nurseries where propagating material of a different category is grown;
- g. for soil-less plants containers of appropriate volume shall be used;
- h. plants grown in containers shall be isolated from the ground by:
 - i. a layer of fine gravel or any inert material providing for effective drainage, at least 10 cm high; when mulching films are used, the minimum height of the French drain is reduced to 5 cm;
 - ii. a layer of concrete or different material; in such a case the containers shall be kept on supports at least 20cm high;
- i. when containers are placed on the ground, the soil shall fulfil the requirements referred to in point 3 above;
- j. the area intended for growing plants in containers shall be isolated from surface water flow and separated by a surrounding zone at least 2 m wide, kept free from any vegetation;
- k. the plots shall be kept under continuous surveillance to control pathogens, pests and weeds;
- l. the plants shall be subdivided in homogeneous lots, easily identifiable and reported on a map;
- m. the plots shall be homogeneous, easily identifiable and isolated from any “CAC” nursery material by a zone at least 2m wide;
- n. the production cycle of the plants to be certified shall not last more than 3 years since their establishment;
- o. the soil shall be isolated from surface and subsurface water flow;
- p. irrigation water shall be found free or cleaned up from harmful organisms in accordance with the Community regulations on the marketing of fruit plants (Ministerial Decree of 14 April 1997) and with the technical annexes of the present decree; freedom from the above shall be substantiated by an official document;

- q. the rooting and acclimation structures shall be isolated from surface and subsurface water flow and kept at 10 cm at least off the ground;
- r. before use, the containers shall preventively be disinfected with a 2% sodium hypochlorite solution for at least 20/30 minutes;
- s. implements shall be at all times disinfected with a 10% sodium hypochlorite solution between cuttings, for each lot.

MEANS FOR *IN VITRO* PRODUCTION OF “PREBASIC”, “BASIC” AND “CERTIFIED” MATERIAL**Part I– *In vitro* production of “Prebasic” and “Basic” material**

- a. Initial explants for micro-propagation (*in vitro* multiplication through axillary buds) shall be collected only from plants grown at the Conservation Centres for Pre-multiplication.
- b. Transplanting operations shall be recorded daily in a book of original entry and, weekly, in a stock book, with non removable, progressively numbered pages, endorsed by the locally competent Regional Phytosanitary Service. The above book shall be stored at all times in the laboratory and made available for inspection, when appropriate. The containers eliminated following contaminations and/or morpho-physiological abnormalities of the culture and the containers moved into the refrigerator, will also be recorded in the book. If necessary, corrections shall be made by crossing out and allowing reading what is written below.
- c. The total duration of proliferation sub-cultures shall be:
 - i. for Conservation, n° 5 subcultures, whereas, when appropriate, cold storage, shall not exceed 12 months in total. After this period, new explants shall be collected from the Conservation Centre for Pre-multiplication. For the production of “Pre-basic” rootstocks and varieties, this stage may be followed by one elongation and one rooting subculture;
 - ii. for Pre-multiplication, n° 7b subcultures, whereas, when appropriate, cold storage shall not exceed 12 months in total. In any case the material under pre-multiplication shall be renewed within 2 years from the initial explant. After this period, new explants shall be collected from the Conservation Centre for Pre-multiplication.
- d. Micro-propagation of chimeric clones is not allowed due to the high risk of obtaining micro-propagated plants which do not conform to the initial phenotype.
- e. It is not allowed to use substances with possible mutagenic effect nor culture systems with bacterial organisms, to facilitate any specific stages.
- f. In the multiplication and rooting stages, laboratories will take the following precautions:
 - i. remove any shoots originated from undifferentiated tissues (callus);
 - ii. at transplanting remove the basal part of the shoot tuft, where undifferentiated tissues can more likely proliferate;
 - iii. use only shoots originated from axillary buds;
 - iv. remove vitrescent cultures and/or those with other morpho-physiological abnormalities (in particular, fasciations).
- g. Growing containers shall be maintained in a specific and clearly identified laboratory compartment and individually labelled so as to be easily recognised. The label shall report the date, the sub-culture progressive number and the growing stage: proliferation, elongation or rooting.
- h. The means and facilities intended for acclimatation shall fulfil the requirements listed in Annex2 of the present protocol.

Part II – Production of “Certified” material

- a. By certified mail, laboratories shall request to the Pre-multiplication Centre the initial number of sterile shoots for each selection. The Pre-multiplication Centre shall deliver the cultures under active multiplication within 6 months after the request. It is allowed to attain a maximum of 18 subcultures for *in vitro* multiplication (even when they are spaced out by one period- at most - of cold storage). During elongation or rooting one more period of cold storage is allowed even if cold has already been applied beforehand.
- b. In the multiplication stage the proliferation sub-cultures shall not last more than 2 years, whereas, when appropriate, cold storage shall not exceed 12 months in total. After this period new sterile shoots shall be used.
- c. Growing containers shall be maintained in a specific and clearly identified laboratory compartment and individually labelled so as to be easily recognised. The label shall report the date, the sub-culture progressive number and the growing stage: proliferation, elongation or rooting.
- d. Transplanting operations shall be recorded daily in a book of original entry and, weekly, in a stock book, with non removable, progressively numbered pages, endorsed by the locally competent Regional Phytosanitary Service. The above book shall be stored at all times in the laboratory and made available for inspection, when appropriate. The containers eliminated following contaminations and/or morpho-physiological abnormalities of the culture and the containers moved into the refrigerator, will also be recorded in the book. If necessary, corrections shall be made by crossing out and allowing to read what is written below.
- e. It is not allowed to use substances with possible mutagenic effect nor culture systems with bacterial organisms, to facilitate any specific stages
- i. In the multiplication and rooting stages, laboratories will take the following precautions:
 - i. growing media shall not induce growth and proliferation of more than 5 new axes per sub-culture;
 - ii. remove any shoots originated from undifferentiated tissues (callus);
 - iii. at transplanting remove the basal part of the shoot tuft, where undifferentiated tissues can more likely proliferate;
 - iv. use only shoots originated from axillary buds;
 - v. remove vitrescent cultures and/or those with other morpho-physiological abnormalities (in particular, fasciations).

“VIRUS-FREE” AND “VIRUS-TESTED” HEALTH STATUS
TABLES FOR “PRE-BASIC”, “BASIC” AND “CERTIFIED” MATERIAL:
DISEASES AND HARMFUL ORGANISMS COVERED BY THE SCHEME.

SPECIES	Disease / Pathogen Official / scientific name	Acronym	Health Status	
			Virus-free (VF)	Virus-tested (VT)
Apricot	VIRUSES			
	<i>Plum pox virus</i>	PPV	X	X
	<i>Apple chlorotic leaf spot virus</i>	ACLSV	X	X
	<i>Apple mosaic virus</i>	ApMV	X	X
	<i>Prune dwarf virus</i>	PDV	X	X
	<i>Prunus necrotic ringspot virus</i>	PNRSV	X	X
	Apricot latent virus	ALV	X	
	Plum bark necrosis stem pitting-associated virus	PBNSPaV	X	
	VIROIDS			
	<i>Hop stunt viroid</i>	HSVd	X	
	PHYTOPLASMAS			
	<i>Candidatus phytoplasma prunorum</i>		X	X
	FUNGI			
	<i>Verticillium dahliae</i>		X	X
	<i>Chondrostereum purpureum</i>		X	X
	<i>Armillaria mellea</i>		X	X
	<i>Rosellinia necatrix</i>		X	X
	BACTERIA			
	<i>Agrobacterium tumefaciens</i>		X	X
	NEMATODES			
<i>Xiphinema diversicaudatum</i>		X	X	
<i>Xiphinema rivesi</i>		X	X	

	<i>Longidorus elongatus</i>		X	X
	<i>Longidorus attenuatus</i>		X	X
	<i>Longidorus macrosoma</i>		X	X
	<i>Pratylenchus vulnus</i>		X	X
	<i>Pratylenchus penetrans</i>		X	X
	<i>Meloidogyne javanica</i>		X	X
	<i>Meloidogyne arenaria</i>		X	X
	<i>Meloidogyne hapla</i>		X	X

SPECIES	Disease / Pathogen Official / scientific name	Acronym	Health status	
			Virus-free (VF)	Virus-tested (VT)
Cherry	VIRUSES			
	<i>Plum pox virus</i>	PPV	X	X
	<i>Apple chlorotic leaf spot virus</i>	ACLSV	X	X
	<i>Apple mosaic virus</i>	ApMV	X	X
	<i>Prune dwarf virus</i>	PDV	X	X
	<i>Prunus necrotic ringspot virus</i>	PNRSV	X	X
	<i>Arabis mosaic virus</i>	ArMV	X	
	<i>Cherry leaf roll virus</i>	CLRv	X	
	<i>Cherry rasp leaf virus</i>	CRLV	X	
	<i>Raspberry ringspot virus</i>	RpRSV	X	
	<i>Strawberry latent ringspot virus</i>	SLRSV	X	
	<i>Tomato black ring virus</i>	TBRV	X	
	<i>Cherry green ring mottle virus</i>	CGRMV	X	
	Little cherry virus 1	LChV-1	X	
	<i>Little cherry virus 2</i>	LChV-2	X	
	<i>American plum line pattern virus</i>	APLPV	X	
	Cherry necrotic rusty mottle virus	CNRMV	X	
	Plum bark necrosis stem pitting-associated virus	PBNSPaV	X	
	VIRUS-LIKE			
	Rusty mottle (European)	CRM	X	
	FUNGI			
	<i>Verticillium dahliae</i>		X	X
	<i>Chondrostereum purpureum</i>		X	X
	<i>Armillaria mellea</i>		X	X
	<i>Rosellinia necatrix</i>		X	X
	BACTERIA			
	<i>Agrobacterium tumefaciens</i>		X	X
	NEMATODES			

	<i>Xiphinema diversicaudatum</i>		X	X
	<i>Xiphinema rivesi</i>		X	X
	<i>Longidorus elongatus</i>		X	X
	<i>Longidorus attenuatus</i>		X	X
	<i>Longidorus macrosoma</i>		X	X
	<i>Pratylenchus vulnus</i>		X	X
	<i>Pratylenchus penetrans</i>		X	X
	<i>Meloidogyne javanica</i>		X	X
	<i>Meloidogyne arenaria</i>		X	X
	<i>Meloidogyne hapla</i>		X	X

SPECIES	Disease / Pathogen Official / scientific name	Acronym	Health status	
			Virus-free (VF)	Virus-tested (VT)
Almond	VIRUSES			
	<i>Plum pox virus</i>	PPV	X	X
	<i>Apple chlorotic leaf spot</i>	ACLSV	X	X
	<i>Apple mosaic virus</i>	ApMV	X	X
	<i>Prune dwarf virus</i>	PDV	X	X
	<i>Prunus necrotic ringspot virus</i>	PNRSV	X	X
	Plum bark necrosis stem pitting-associated virus	PBNSPaV	X	
	FUNGI			
	<i>Verticillium dahliae</i>		X	X
	<i>Chondrostereum purpureum</i>		X	X
	<i>Armillaria mellea</i>		X	X
	<i>Rosellinia necatrix</i>		X	X
	BACTERIA			
	<i>Agrobacterium tumefaciens</i>		X	X
	NEMATODES			
	<i>Xiphinema diversicaudatum</i>		X	X
	<i>Xiphinema rivesi</i>		X	X
	<i>Longidorus elongatus</i>		X	X
	<i>Longidorus attenuatus</i>		X	X
	<i>Longidorus macrosoma</i>		X	X
	<i>Pratylenchus vulnus</i>		X	X
	<i>Pratylenchus penetrans</i>		X	X
<i>Meloidogyne javanica</i>		X	X	
<i>Meloidogyne arenaria</i>		X	X	
<i>Meloidogyne hapla</i>		X	X	

SPECIES	Disease / Pathogen Official / scientific name	Acronym	Health status	
			Virus-free (VF)	Virus-tested (VT)
Peach	VIRUSES			
	<i>Plum pox virus</i>	PPV	X	X
	<i>Apple chlorotic leaf spot</i>	ACLSV	X	X
	<i>Apple mosaic virus</i>	ApMV	X	X
	<i>Prune dwarf virus</i>	PDV	X	X
	<i>Prunus necrotic ringspot virus</i>	PNRSV	X	X
	<i>Strawberry latent ringspot</i>	SLRSV	X	
	<i>Tomato black ring</i>	TBRV	X	
	<i>Cherry green ring mottle virus</i>	CGRMV	X	
	Apricot latent virus	ALV	X	
	<i>American plum line pattern virus</i>	APLPV	X	
	Plum bark necrosis stem pitting-associated virus	PBNSPaV	X	
	VIROIDS			
	<i>Peach latent mosaiv viroid</i>	PLMVd	X	X
	<i>Hop stunt viroid</i>	HSVd	X	
	PHYTOPLASMAS			
	<i>Candidatus phytoplasma prunorum</i>		X	X
	FUNGI			
	<i>Verticillium dahliae</i>		X	X
	<i>Chondrostereum purpureum</i>		X	X
	<i>Armillaria mellea</i>		X	X
	<i>Rosellinia necatrix</i>		X	X
	BACTERIA			
	<i>Agrobacterium tumefaciens</i>		X	X
	NEMATODES			
	<i>Xiphinema diversicaudatum</i>		X	X
<i>Xiphinema rivesi</i>		X	X	
<i>Longidorus elongatus</i>		X	X	

	<i>Longidorus attenuatus</i>		X	X
	<i>Longidorus macrosoma</i>		X	X
	<i>Pratylenchus vulnus</i>		X	X
	<i>Pratylenchus penetrans</i>		X	X
	<i>Meloidogyne javanica</i>		X	X
	<i>Meloidogyne arenaria</i>		X	X
	<i>Meloidogyne hapla</i>		X	X

SPECIES	Disease / Pathogen Official / scientific name	Acronym	Health status	
			Virus-free (VF)	Virus-tested (VT)
Plum	VIRUSES			
	<i>Plum pox virus</i>	PPV	X	X
	<i>Apple chlorotic leaf spot</i>	ACLSV	X	X
	<i>Apple mosaic virus</i>	ApMV	X	X
	<i>Prune dwarf virus</i>	PDV	X	X
	<i>Prunus necrotic ringspot virus</i>	PNRSV	X	X
	<i>Myrabolan latent ringspot virus</i>	MLRSV	X	
	<i>American plum line pattern virus</i>	APLPV	X	
	Plum bark necrosis stem pitting-associated virus	PBNSPaV	X	
	VIROIDS			
	<i>Hop stunt viroid</i>	HSVd	X	
	PHYTOPLASMAS			
	<i>Candidatus phytoplasma prunorum</i>		X	X
	FUNGI			
	<i>Verticillium dahliae</i>		X	X
	<i>Chondrostereum purpureum</i>		X	X
	<i>Armillaria mellea</i>		X	X
	<i>Rosellinia necatrix</i>		X	X
	BACTERIA			
	<i>Agrobacterium tumefaciens</i>		X	X
	NEMATODES			
	<i>Xiphinema diversicaudatum</i>		X	X
	<i>Xiphinema rivesi</i>		X	X
	<i>Longidorus elongatus</i>		X	X
	<i>Longidorus attenuatus</i>		X	X
	<i>Longidorus macrosoma</i>		X	X
	<i>Pratylenchus vulnus</i>		X	X
	<i>Pratylenchus penetrans</i>		X	X

	<i>Meloidogyne javanica</i>		X	X
	<i>Meloidogyne arenaria</i>		X	X
	<i>Meloidogyne hapla</i>		X	X

SANITARY CHECKS

Part I – On “Prebasic”, “Basic” and “Certified” material

Virus, viroids, phytoplasmas, and fungi

Two types of check shall be carried out:

- a. visual inspections:
 - i. in spring and at colour break for virus diseases;
 - ii. in summer for viroid and phytoplasma diseases;
 - iii. at the appropriate time, when symptoms are likely to be most visible, for fungal and bacterial diseases;
- b. laboratory testing according to the procedures indicated in tables 1 to 10 of the present annex.

All material descended from the first multiplication of the primary source at the entry into the Conservation Centre for Pre-multiplication or in the other steps shall be individually submitted to sanitary and trueness-to-type checks according to the procedure reported in tables 1 to 10 of the present annex.

Part II- On soil and growing media used at any stage

Fungi: for *Verticillium dahliae* and *Chondrostereum purpureum*

Bacteria: *Agrobacterium tumefaciens*

Diagnostic tests: classical isolation from soils and growing media

Sampling procedure:

- soil: before planting and, at any time, before any deep tillage, 5 samples per hectare shall be collected, each made up of 10 sub-samples, for a total volume of at least 1 litre;
- growing media: a sample shall be collected every 5 m³, made up of 10 sub-samples, for a total volume of at least 1 litre.

Nematodes: *Xiphinema diversicaudatum*, *X. rivesi*, *Longidorus elongatus*, *L. attenuatus*, *L. macrosoma*, * *Pratylenchus vulnus**, **P. penetrans*, **Meloidogyne javanica*, **M. arenaria*, **M. hapla* .

Diagnostic tests: classical isolation from soils and growing media

Sampling procedure:

- soil: before planting and, at any time, before any deep tillage, 5 samples per hectare shall be collected, each made up of 10 sub-samples, for a total volume of at least 1 litre;
- growing media: a sample shall be collected every 5 m³, made up of 10 sub-samples, for a total volume of at least 1 litre.

* only for soil or growing media used for the production of “certified” plants, e.g. stool bed rootstock mother plants and in the nursery

Tables of the procedure for the assessment of “Virus-free” and “Virus-tested” health status of Primary Sources and of “Pre-Basic” and “Basic” Seed Mother Plants (SMP) and Scion Mother Plants (ScMP)

Table1:Apricot

Harmful organism	CHECKS					
	Visual inspections		Biological assay		Laboratory testing: serological or molecular	
	Frequency	Time	Recommended indicator	Frequency	Frequency	Sample type, time and Tests
VIRUSES						
PPV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta <i>P. armeniaca</i> : Priana	Every 5 years starting from the 5 th year	On all plants every year	<u>Leaves</u> : From growth recovery until a temperature of 25°C ELISA, RT-PCR, Hybridisation
ACLSV ApMV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta <i>P. armeniaca</i>	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Leaves</u> : From growth recovery until a temperature of 25°C <u>Leaves and branches</u> : March-May ELISA, RT-PCR, Hybridisation
PDV PNRSV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta; <i>P. serrulata</i> : Shirofugen or Kwanzan	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Leaves</u> : From growth recovery until a temperature of 25°C ELISA, RT-PCR, Hybridisation
ALV	Annual	In Summer	<i>P. persica</i> : GF 305 or Elberta <i>P. armeniaca</i>	Every 5 years starting from the 5 th year	On all plants once	<u>Leaves or phloem tissues</u> : in summer RT-PCR, Hybridisation
PBNPaV	Annual	At any time of the year			On all plants once	<u>Leaves or phloem tissues</u> : in summer RT-PCR, Hybridisation
VIROIDS						
HSVd	Annual	From growth recovery until Autumn			On all plants once	<u>Leaves</u> : in summer RT-PCR, Hybridisation
PHYTOPLASMAS						
	Annual	From Autumn-Winter until growth recovery	<i>P. persica</i> : GF 305	Every 5 years starting from the 5 th year	Every 5 years from the 5 th year on 10% of plants	<u>Leaf petioles and veins, twig phloem</u> : in summer PCR

Table2: Cherry

Harmful organism	CHECKS					
	Visual inspections		Biological assay		Laboratory testing: serological or molecular	
	Frequency	Time	Recommended indicator	Frequency	Frequency	Sample type, time and Tests
VIRUSES						
PPV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta <i>P. armeniaca</i> : Priana	Every 5 years starting from the 5 th year	On all plants every year	<u>Leaves</u> : From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
PDV PNRSV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta; <i>P. serrulata</i> : Shirofugen or Kwanzan	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Flower and laves</u> : From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
ACLSV ApMV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Leaves</u> : From growth recovery until a temperature of 25°C <u>Leaves and branches</u> : March-May ELISA, RT-PCR, Hybridisation
CLRV CRLV RpRSV SLRSV TBRV ArMV CNRMV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Leaves</u> : From growth recovery until a temperature of 25°C <u>Leaves and branches</u> : March-May ELISA, RT-PCR, Hybridisation
APLPV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta <i>P. armeniaca</i>	Every 5 years starting from the 5 th year	On all plants once	<u>Leaves or phloem tissues</u> : in summer ELISA, RT-PCR, Hybridisation
PBNPaV	Annual	At any time of the year			On all plants once	<u>Leaves or phloem tissues</u> : in summer RT-PCR, Hybridisation
CGRMV LChV-1 LChV-2	Annual	From growth recovery until a temperature of 25°C				
VIRUS-LIKE AGENTS						
CRM	Annual	From growth recovery until a temperature of 25°C				

Table 3 – Almond

Harmful organism	CHECKS					
	Visual inspections		Biological assay		Laboratory testing: serological or molecular	
	Frequency	Time	Recommended indicator	Frequency	Frequency	Sample type, time and tests
VIRUSES						
PPV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta	Every 5 years starting from the 5 th year	On all plants every year	<u>Leaves</u> : From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
PDV PNRSV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta; <i>P. serrulata</i> : Shirofugen or Kwanzan	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Flower and leaves</u> : From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
ACLSV ApMV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Leaves</u> : From growth recovery until a temperature of 25°C <u>Leaves and branches</u> : March-May ELISA, RT-PCR, Hybridisation
PBNSPaV	Annual	At any time of the year			On all plants once	<u>Leaves or phloem tissues</u> : in summer RT-PCR, Hybridisation

Table 4 – Peach

Harmful Organism	CHECKS					
	Visual inspections		Biological assay		Laboratory testing: serological or molecular	
	Frequency	Time	Recommended indicator	Frequency	Frequency	Sample type, time and Tests
VIRUSES						
PPV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica:</i> GF 305 or Elberta	Every 5 years starting from the 5 th year	On all plants every year	<u>Leaves:</u> From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
PDV PNSRV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica:</i> GF 305 or Elberta; <i>P. serrulata:</i> Shirofugen or Kwanzan	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Flower and leaves:</u> From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
ACLSV ApMV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica:</i> GF 305 or Elberta	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Leaves:</u> From growth recovery until a temperature of 25°C <u>Leaves and branches:</u> March-May ELISA, RT-PCR, Hybridisation
CGRMV SLRSV TBRV	Annual	From growth recovery until a temperature of 25°C			On all plants within 6 years	<u>Leaves:</u> From growth recovery until a temperature of 25°C ELISA, RT-PCR, Hybridisation
APLPV ALV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica:</i> GF 305 or Elberta <i>P. armeniaca</i>	Every 5 years starting from the 5 th year	On all plants once	<u>Leaves or phloem tissues:</u> in summer ELISA, RT-PCR, Hybridisation
PBNSPaV	Annual	At any time of the year			On all plants once	<u>Leaves or phloem tissues:</u> in summer RT-PCR, Hybridisation
VIROIDS						
PLMVd	Annual	From growth recovery until Autumn			Annual from the 5 th year	<u>Leaves:</u> in summer RT-PCR, Hybridisation
HSVd	Annual	From growth recovery until Autumn			Annual from the 5 ^h year	<u>Leaves:</u> in summer RT-PCR, Hybridisation
PHYTOPLASMAS						
	Annual	From Autumn-Winter until growth recovery	<i>P. persica:</i> GF 305	Every 5 years starting from the 5 th year	Every 5 years from the 5 th year on 10% of plants	<u>Leaf petioles and veins, twig phloem:</u> in summer PCR

Table 5 – Plum

Harmful organism	CHECKS					
	Visual inspections		Biological assay		Laboratory testing: serological or molecular	
	Frequency	Time	Recommended indicator	Frequency	Frequency	Sample type, time and Tests
VIRUSES						
PPV	Annual	From growth recovery until a temperature of 25°C	<i>Prunus persica</i> : GF 305 or Elberta	Every 5 years starting from the 5 th year	On all plants every year	<u>Leaves</u> : From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
PDV PNRSV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta; <i>P. serrulata</i> : Shirofugen or Kwanzan	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Flowers e Leaves</u> : From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
ACLSV ApMV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta	Every 5 years starting from the 5 th year	On all plants within 6 years	<u>Leaves</u> : From growth recovery until a temperature of 25°C <u>Leaves and branches</u> : March-May ELISA, RT-PCR, Hybridisation
MLRSV	Annual	From growth recovery until a temperature of 25°C				
APLPV ALV	Annual	From growth recovery until a temperature of 25°C	<i>P. persica</i> : GF 305 or Elberta <i>P. armeniaca</i>	Every 5 years starting from the 5 th year	On all plants once	<u>Leaves or phloem tissues</u> : in summer ELISA, RT-PCR, Hybridisation
PBNPaV	Annual	At any time of the year			On all plants once	<u>Leaves or phloem tissues</u> : in summer RT-PCR, Hybridisation
VIROIDS						
PLMVd HSVd	Annual	From growth recovery until Autumn			Annual starting from the 5 th year	<u>Leaves</u> : in summer RT-PCR, Hybridisation
PHYTOPLASMAS						
	Annual	From Autumn-Winter until growth recovery			Every 5 years from the 5 th year on 10% of plants	<u>Leaf petioles and veins, twig phloem</u> : in summer PCR

**Tables of the procedure for the assessment of “Virus-free” and “Virus-tested” health status
of “Certified” Seed Mother Plants (SMP) and Scion Mother Plants (ScMP)**

Table 6 – Apricot

Harmful organism	CHECKS			
	Visual inspections		Laboratory testing: serological or molecular	
	Frequency	Time	Frequency	Sample type, time and Tests
VIRUSES				
PPV	Annual	From growth recovery until a temperature of 25°C	On all plants every year	<u>Leaves</u> : From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
PDV PNRSV	Annual	From growth recovery until a temperature of 25°C	On 10% of plants every year	<u>Flowers e Leaves</u> : From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
ACLSV ApMV	Annual	From growth recovery until a temperature of 25°C		
ALV	Annual	In summer		
PBNSPaV	Annual	At any time of the year		
VIROIDS				
HSVd	Annual	From growth recovery until autumn		
PHYTOPLASMAS				
	Annual	From Autumn-Winter until growth recovery		

Table 7 – Cherry

Harmful organism	CHECKS			
	Visual inspections		Laboratory testing: serological or molecular	
	Frequency	Time	Frequency	Sample type, time and Tests
VIRUSES				
PPV	Annual	From growth recovery until a temperature of 25°C	On all plants every year	<u>Leaves:</u> From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
PDV PNRSV	Annual	From growth recovery until a temperature of 25°C	On 10% of plants every year	<u>Flowers and leaves:</u> From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
ACLSV ApMV	Annual	From growth recovery until a temperature of 25°C		
CLRV CRLV RpRSV SLRSV TBRV ArMV CGRMV LChV-1 LChV-2 APLPV CNRMV	Annual	From growth recovery until a temperature of 25°C		
PBNPaV	Annual	At any time of the year		
VIRUS-LIKE AGENTS				
CRM	Annual	From growth recovery until a temperature of 25°C		

Table 8 - Almond

Harmful organism	CHECKS			
	Visual inspections		Laboratory testing: serological or molecular	
	Frequency	Time	Frequency	Sample type, time and Tests
VIRUSES				
PPV	Annual	From growth recovery until a temperature of 25°C	On all plants every year	<u>Leaves</u> : From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
PDV PNRSV	Annual	From growth recovery until a temperature of 25°C	On 10% of plants every year	<u>Flowers and leaves</u> : From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
ACLSV ApMV	Annual	From growth recovery until a temperature of 25°C		
PBNPaV	Annual	At any time of the year		

Table 9 Peach

Harmful organism	CHECKS			
	Visual inspections		Laboratory testing: serological or molecular	
	Frequency	Time	Frequency	Sample type, time and Tests
VIRUSES				
PPV	Annual	From growth recovery until a temperature of 25°C	On all plants every year	<u>Leaves:</u> From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
PDV PNRSV	Annual	From growth recovery until a temperature of 25°C	On 10% of plants every year	<u>Flower and Leaves:</u> From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
ACLSV ApMV APLPV SLRSV TBRV CGRMV ALV	Annual	From growth recovery until a temperature of 25°C		
PBNPaV	Annual	At any time of the year		
VIROIDS				
PLMVd	Annual	From growth recovery until Autumn		
HSVd	Annual	From growth recovery until Autumn		
PHYTOPLASMAS				
	Annual	From Autumn-Winter until growth recovery		

Table 10 – Plum

Harmful organism	<i>CHECKS</i>			
	Visual inspections		Laboratory testing: serological or molecular	
	Frequency	Time	Frequency	Sample type, time and Tests
VIRUSES				
PPV	Annual	From growth recovery until a temperature of 25°C	On all plants every year	<u>Leaves:</u> From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
PDV PNRSV	Annual	From growth recovery until a temperature of 25°C	On 10% of plants every year	<u>Flower and leaves:</u> From growth recovery until a temperature of 25°C During dormancy ELISA, RT-PCR, Hybridisation
ACLSV ApMV APLPV MLRSV	Annual	From growth recovery until a temperature of 25°C		
PBNPaV	Annual	At any time of the year		
VIROIDS				
HSVd	Annual	From growth recovery until Autumn		
PHYTOPLASMAS				
	Annual	From Autumn-Winter until growth recovery		

TRUENESS-TO-TYPE CHECKS

The trueness-to-type certification is based on pomological and agronomic observations. It can also be issued with the support of molecular techniques when the primary source brought into the national certification scheme is accompanied by appropriate molecular documentation.

Part I – On “Pre-basic” and “Basic” material

The trueness-to-type certification for stone fruit cultivars and clones intended for fruit production shall be issued provided that:

- i. at least one fruit-setting is observed or else,
- ii. DNA analysis is performed through SSR microsatellites, on a basis of not less than 20 “primer pairs”, made available by the plant breeder, capable of distinguishing the variety or the clone, depending on whether a variety or a new clone is to be registered, or through one or more techniques recognised as appropriate, according to the instructions provided by the plant breeder (RAPD, RFLP, AFLP etc).

The trueness-to-type certification for clonal rootstocks shall be issued provided that:

- iii. at least two annual growing cycles of nursery propagation are carried out and the phenotype conformity is checked or else,
- iv. DNA analysis is performed through SSR microsatellites, on a basis of not less than 20 “primer pairs”, made available by the plant breeder, capable of distinguishing the clone or through one or more techniques recognised as appropriate, according to the instructions provided by the plant breeder (RAPD, RFLP, AFLP etc).

If trueness-to type-is assessed by using a morphological key, in the first one-two blooming and fruit-setting years, at least two checks shall be performed and repeated annually on all the above material, during the growing cycle, in the following phenological stages:

- Blooming
- Fruit harvesting.

Part II – Checks on “Certified” Mother Plants

To allow collecting of certified material, the competent Regional Phytosanitary Service shall ascertain the trueness-to- type of all plants following:

- i. the observation of at least one fruit-setting or else,
- ii. the completion of DNA analysis, through SSR microsatellites, on a basis of not less than 20 “primer pairs”, made available by the plant breeder, capable of distinguishing the variety or the clone, depending on whether a variety or a new clone is to be registered, or through one or more techniques recognised as appropriate, according to the instructions provided by the plant breeder (RAPD, RFLP, AFLP etc).