

**THE MINISTRY OF AGRICULTURE, FOOD AND FORESTRY**

DECREE of 31 October 2013

Phytosanitary measures to control

«Citrus Tristeza Virus»

**THE MINISTER OF AGRICULTURE, FOOD AND FORESTRY**

Having regard to Council Directive 2000/29/EEC of 8 May 2000, as amended, on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community;

Having regard to Legislative Decree No 214 of 19 August 2005, as amended and supplemented, implementing Directive 2002/89/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community;

Having regard to Legislative Decree No 214 of 25 June 2010 implementing Council Directive 2008/90/EC on the marketing of fruit plant propagating material and fruit plants intended for fruit production;

Having regard to Ministerial Decree of 22 November 1996 on mandatory control of Citrus Tristeza Virus;

Having regard to Ministerial Decree of 14 April 1997 on the technical protocol for the marketing of fruit plant propagating material and fruit plants intended for fruit production;

Having regard to Ministerial Decree of 24 July 2003 on the organisation of the National Service for Voluntary Certification of Fruit Plant Propagating Material;

Having regard to Ministerial Decree of 20 November 2006 on the Technical protocol for the production of certified Citrus propagation material;

Having regard to Ministerial Decree of 12 November 2009 establishing professional requirements and minimum equipment for the production, trade and import of plants and plant products;

Whereas it is necessary to avoid the spread of Citrus Tristeza Virus, which causes quick decline of many citrus species, mostly if grafted onto sour orange rootstock;

Whereas it is necessary to prevent the introduction of non-European strains of the virus through effective phytosanitary measures;

Whereas no effective direct method is available to combat Citrus Tristeza Virus and control has to rely on infection prevention or containment;

Whereas Citrus Tristeza Virus is to be considered established, eradication is no longer technically feasible in some areas of the national territory, and effective prophylaxis is required;

Whereas beside sour orange rootstock, which is highly susceptible to Citrus Tristeza Virus and widely used in Italian citrus orchards, tolerant or resistant rootstocks are available;

Whereas it is necessary to differentiate phytosanitary measures based on the virulence of the strain of Citrus Tristeza Virus and transmissibility by insect vectors;

Whereas crop profitability may be improved by the use of certified CTV-free budwood, tolerant or resistant rootstocks and eradication of plants infected with severe strains;

Having considered the necessity to impose stricter requirements on the production of CTV-free budwood;

Whereas *Toxoptera citricidus* is the most efficient insect vector of severe strains of CTV and it has not been reported within the national territory yet, appropriate phytosanitary measures need to be adopted to delay its introduction from Spain and Portugal where it is currently found;

Having considered the necessity to update national regulations on the control of Citrus Tristeza Virus;

Having obtained the opinion of the National Plant Protection Committee, pursuant to art. 52 of Legislative Decree No 214 of 19 August 2005, expressed in the meeting of 5 and 6 February 2013;

Having obtained the opinion of the Standing Conference for Relations between the State, the Regions and the Autonomous Provinces of Trento and Bolzano, expressed in the meeting of 11 July 2013, pursuant to art. 2(4) of Legislative Decree No 282 of 28 August 1997;

Orders:

Art. 1

*Purpose*

1. This Decree shall establish mandatory phytosanitary measures to prevent and contain the spread of tristeza caused by «Citrus Tristeza Virus» (hereinafter CTV) across the territory of the Italian Republic.

Art. 2

*Definitions*

1. For the purposes of this Decree, the following definitions shall apply:

- a) «host plants»: all plants belonging to the genera *Citrus* L., *Fortunella* Swingle, *Poncirus* Raf and their hybrids, as well as other genera within the *Aurantioideae* subfamily, hereinafter «host plants of CTV»;
- b) «severe strain»: a genotype or biotype which causes symptoms in the field even on tolerant or resistant rootstocks;
- c) «CTV-free area»: an area in which, following systematic surveys, no virus-infected plants have been found or the virus has been eradicated and officially declared eradicated by the responsible regional Plant Protection Service;
- d) «focus area»: an area or site in which the occurrence of CTV has been officially confirmed and eradication is deemed technically feasible;
- e) «containment zone»: an area in which eradication is no longer technically feasible, given the spread of CTV, but infection may be contained below 6% in the long run;
- f) «infected area»: an area in which containment measures are no longer effective given the spread of the harmful organism;
- g) «buffer zone»: a 1km area drawn from the boundary of the focus area or the containment zone or the infected area;

h) «CTV-free production site»: a production site located within the areas referred to in points d), e), f), g), established as CTV-free by the responsible regional Plant Protection Service, in accordance with the FAO ISPM No 10 and Annex IV, Section II of Legislative Decree No 214/2005;

i) «Lot»: homogeneous group of plants having same grafting date, rootstock, variety, origin of scion and location.

### Art. 3

#### *Official Surveys*

1. The regional Plant Protection Services, hereinafter “SFR”, shall conduct official annual surveys to check for the presence, incidence and spread of the virus and define the phytosanitary status of the territory.

2. Surveys shall consist of visual inspections of host plants and appropriate laboratory testing to detect CTV, carried out at the most appropriate times and as recommended in Chapter 1 of the attached «Technical Protocol on the application of phytosanitary measures against Citrus Tristeza Virus (CTV)», hereinafter the «Annex».

3. Pursuant to art. 49(2)(c) of Legislative Decree No 214/2005, the Central Plant Protection Service shall amend the Annex attached to this Decree on procedures and protocols to carry out surveys.

4. The regional Plant Protection Services shall notify to the Central Plant Protection Service the demarcated areas, the results of official surveys and the list of nurseries subject to suspended authorisation, by 31 January of each year. The Central Plant Protection Service shall communicate the final report to the SFRs.

5. The SFRs shall appropriately publicise the demarcated areas referred to in paragraph 4.

### Art. 4

#### *Phytosanitary measures in CTV-free areas*

1. In CTV-free areas, surveys referred to in article 3 shall be carried out in mother blocks, collection blocks, nurseries, newly-planted citrus orchards, parks, gardens, etc., with specific focus on ornamental citrus which may be responsible for the introduction of non-European strains.

2. In case of confirmed occurrence of CTV infection within a CTV-free area, the SFR shall establish a focus area and a surrounding buffer zone.

### Art. 5

#### *Phytosanitary measures in the focus area*

1. Within the area designated as a focus area, the responsible SFR shall, as provided for in the Annex: define through surveys the incidence of CTV infections;

require that all infected plants or the whole orchard be removed by the owner or tenant of the infected field or nursery and expense be borne by the same;

require additional phytosanitary measures to avoid spread of the virus.

2. As regards commercial fruit orchards, the SFR shall require that the whole planted area be removed if the percentage of infected plants is higher than that suggested in Chapter 3 of the Annex. By way of derogation, the infected plants alone may be removed if all citrus plants in the focus area have been tested at the owner’s/tenant’s expense.

3. Without prejudice to article 9 (2), nursery operations, removal of propagation material and

movement of host plants shall be prohibited in the focus area.

4. Where in the focus area and surrounding buffer zone no other infected plant is detected for 3 consecutive vegetative cycles after removal, the SFR shall declare the virus officially eradicated from the focus area and reinstate the pest-free status again.

5. In cases where short-term eradication is not technically feasible given the spread of the harmful organism, the focus area may be designated as a containment zone or an infected area.

#### Art. 6

##### *Phytosanitary measures in the buffer zones*

1. In the buffer zone, the regional Plant Protection Service shall carry out annual surveys to confirm the absence of CTV-infected plants, according to the procedures set out in the Annex. If the presence of infected plants is detected within the buffer zone, the delimitation of the same shall be reviewed by the SFR and the provisions for focus areas shall apply.

2. Without prejudice to article 9 (2), nursery operations, removal of propagation material and movement of host plants shall be prohibited in the buffer zone.

#### Art. 7

##### *Phytosanitary measures in containment zones*

1. Within the area designated as a containment zone, the responsible SFR shall, as provided for in the Annex:

define through surveys the incidence of CTV infections;

require that all infected plants or the whole orchard be removed by the owner or tenant of the infected field or nursery and expense be borne by the same.

2. As regards commercial fruit orchards, the SFR shall require that the whole planted area be removed if the percentage of infected plants is higher than the one suggested in Chapter 3 of the Annex. By way of derogation, the infected plants alone may be removed if all citrus plants in the focus area have been tested at the owner's/tenant's expense.

3. The SFR may require additional phytosanitary measures to contain CTV infection below 6% on average, in the long run.

4. Without prejudice to article 9 (2), nursery operations, removal of propagation material and movement of host plants shall be prohibited in the containment zone.

#### Art. 8

##### *Phytosanitary measures in infected areas*

1. In the infected area, the SFR shall ensure adequate information and support to favour the use of CTV-tolerant or resistant rootstocks, species or varieties.

2. In the infected area, the responsible SFR shall require that a targeted survey be conducted to detect CTV foci and severe strains and infected plants be removed, where official testing have confirmed the presence of such strains. The SFR shall prescribe the removal of the whole planted area if the percentage of plants infected with severe strains is higher than that set in Chapter 3 of the Annex.

3. Without prejudice to the provisions of Article 9(2), nursery operations, budwood removal and handling of host plants shall be prohibited in the infected area.

Art. 9

*Phytosanitary measures in nurseries*

1. Without prejudice to the provisions referred to in paragraph 2, nursery production of citrus plants shall only be permitted in CTV-free areas.

2. Pursuant to articles 19 and 26 of Legislative Decree 214/05, Plant Protection Services may in CTV-free areas:

issue new authorisations to nurseries to produce citrus stock intended for planting in commercial orchards, mother blocks and increase blocks, in accordance with the FAO ISPM No 10 provided that such activity is carried out in accordance with the provisions laid down in Annex IV, Section. II of Legislative Decree No 214/2005, point 10(b) and the conditions laid down in Chapter 4 of the Annex;

authorise nurseries to produce citrus plants intended for ornamental purposes, in accordance with the FAO ISPM No 10 provided that such activity is carried out in accordance with the provisions laid down in Annex IV, Section. II of Legislative Decree No 214/2005, point 10(b) or (c) and the conditions laid down in Chapter 4 of the Annex;

allow nurseries, which were already authorised at the time of entry into force of this Decree, to produce citrus stock intended for planting in commercial orchards, in accordance with the FAO ISPM No 10 provided that such activity is carried out in accordance with the provisions laid down in Annex IV, Section II of Legislative Decree No 214/2005, point 10(b) or, only for the production of citrus stock intended for transfer to infected areas, in accordance with the conditions laid down in Annex IV, Section II of Legislative Decree No 214/2005, point 10 (c) and the conditions laid down in Chapter 4 of the Annex.

3. The area within which the nursery is located and where infected plants are reported shall be designated as a «focus area». All infected host plants shall be destroyed at the owner's/tenant's expense and under the supervision of the SFR, in accordance with the conditions laid down in the Annex.

Art. 10

*Phytosanitary measures in certification sites*

Pursuant to Ministerial Decree of 20 November 2006, should CTV-infected plants be found in certification sites, the same shall be destroyed, movement of citrus budwood shall be suspended for the following three years, until repeated (molecular, biological and immunoassay) testing yields a negative result.

Art. 11

*Establishing citrus orchards*

1. Pursuant to Ministerial Decree of 20 November 2006, certified citrus stock or budwood shall be used for establishing a planting of citrus trees. By way of derogation, should the variety be unavailable, the responsible SFR may authorise the use of CAC material, pursuant to Ministerial Decree of 14 April 1997.

2. Movement of self-produced propagation material derived from sources, which have not been subject to official phytosanitary control by SFR, shall be prohibited.

3. Planting of citrus stock for the establishment of commercial orchards shall be notified to the SFR, in accordance with the conditions laid down in Chapter 5 of the Annex.

4. Municipalities, public bodies, and green-related businesses shall notify the SFR of any planned establishment of ornamental citrus-growing areas in gardens, alleys or public spaces, as prescribed

in Chapter 5 of the Annex.

Art. 12

*Holding of infected plants*

1. Without prejudice to the provisions laid down in Title X of Legislative Decree No 214/2005, the holding, transfer and handling of CTV-infected plants shall be prohibited.
2. Pursuant to art. 8(1) of Legislative Decree No 214/2005, any person who holds citrus plants shall promptly notify to the SFR the presence of infected plants, pursuant to art. 8(1) of Legislative Decree No 214/2005.

Art. 13

*Penalties*

The administrative penalties laid down in Article 54 of Legislative Decree No 214 of 19 August 2005 shall apply to anyone breaching the provisions of this Decree.

Art. 14

*Aid schemes for grubbing up*

1. In order to prevent significant damage to the economy of an agricultural area, Regions and Autonomous Provinces may set up aid schemes to compensate fruit growers for removed acreage, as a result of a CTV infection.

Art. 15

*Financial invariance clause*

1. No further or higher charges on public finance may arise as a consequence of the enforcement of this Decree.
2. The stipulated obligations shall be fulfilled with the human and material resources available under an unchanged legislation scenario.

Art. 16

*Final provisions*

1. Ministerial Decree of 22 November 1996 on mandatory control of "Citrus Tristeza Virus is repealed.

This decree shall enter into force the day after its publication in the Italian Official Journal.

Rome, 31 October 2013

The Minister: DE GIROLAMO

Registered at the Court of Auditors on 23 December 2013

Supervisory Body of the Italian Ministry of Economic Development – Ministry of Agriculture, Food and Forestry, Reg. No 11, Page No 155

TECHNICAL PROTOCOL ON PHYTOSANITARY MEASURES AGAINST CITRUS  
TRISTEZA VIRUS (CTV)

CHAPTER 1

Methodology to set up a survey grid.

Surveys shall be conducted in all sites where host plants are found, giving priority to: mother blocks, collection blocks, nurseries, commercial orchards, gardens and parks.

Among commercial orchards, priority shall be given to:

orchards in the vicinity of nurseries (within 1 km of the nursery);

newly-planted establishments, privileging those with varieties which are not included in the Variety Register, pursuant to article 14 of Ministerial Decree of 24 July 2003.

During surveys attention shall focus on the detection of *Toxoptera citricidus*, preferably in organically grown citrus orchards or in orchards where no insecticide treatments have been recently applied, checking for the presence of shoots or flower buds infested with brown to black aphids and ruling out colonies of other colours. In case of suspected colonies, infested shoots shall be collected and sent to the SFR-accredited entomology laboratories, pursuant to Ministerial Decree of 14 April 1997, for identification and official diagnosis.

Sampling method.

1 – Commercial citrus orchards in CTV-free areas, focus areas, buffer zones and containment zones.

In order to detect CTV infection, sampling shall be carried out on 12.5% of the plants of each orchard, according to the modified «Gottwald & Hughes - 2000» method.

Each sample shall consist of 4 shoots per plant, taken at the four cardinal directions. Sampled plants shall be equally distributed across the orchard, following the path shown in the example below:

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The resulting percentage of infected plants shall correspond to the percentage of infection in the orchard.

2 - Commercial citrus orchards in infected areas

In an infected area, in order to detect sever strain foci, surveys shall be carried out on symptomatic citrus plants of different species, varieties and origin, grafted onto tolerant rootstocks and on sour orange.

Surveys shall consist of visual inspection and sampling of symptomatic plants. Samples shall be analysed for the presence of CTV and if they are found infected, strain characterisation shall follow.

3 – Sources of budwood and nurseries located in CTV-free areas, focus areas, buffer zones and containment zones.

Samples shall be taken from:

100% of mother plants;

at least 10% of increase block plants (set up to increase propagation material of each single mother plant);

at least 5% of the plants grown per homogeneous lot in nurseries. Samples shall consist of:

budwood sources: each sample shall consist of 4 shoots per plant;

increase blocks and lots of growing plants: 1 shoot shall be taken from each randomly selected plant. Every 5 sampled shoots shall make up a sample, or 2 shoots shall be sampled per plant and tested individually.

4 - Sources of budwood and nurseries located in infected areas.

Samples shall be taken from:

100% of mother plants;

at least 10% of increase block plants (set up to increase propagation material of each single mother plant);

at least 50% of the plants grown per homogeneous lot in screen houses- expense shall be borne by the nurseryman;

all plants grown in the open field - expense shall be borne by the nurseryman.

## CHAPTER 2 - DIAGNOSIS

Diagnostic methods to be used to confirm CTV infection.

Serological or molecular tests shall be used, as laid down in EPPO PM 7/31, as amended and supplemented.

Other scientifically validated methods may be used.

Strain characterisation essays.

Strain characterisation shall be performed using biological and molecular methods. Biological essays on indicator plants shall comply with the standards described by Garnsey et al. (2005). Molecular methods shall consist of RT-PCR, followed by sequencing of specific traits of the genome. Other scientifically validated methods may be used.

Strain characterisation accredited laboratories.

For strain characterisation, Regional Plant Protection Services shall resort to accredited public or State-controlled agricultural research and experimentation laboratories, pursuant to Ministerial Decree of 14 April 1997.

## CHAPTER 3 – MEASURES TO BE ADOPTED WHERE CTV IS PRESENT

CTV-infected plants shall be grubbed up. The SFR shall prescribe handling and disposal modalities of the resulting plant material.

3.1 – Commercial citrus orchards located in CTV-free areas, focus areas, buffer zones and containment zones.

Where the percentage of infected plants is > 15%, the whole orchard shall be removed. By way of derogation and upon formal proposal by the owner/tenant of the citrus orchard, the SFR may require that the infected plants alone be removed, provided that all citrus plants in the orchard have been tested at the owner's/tenant's expense and under the supervision of the SFR.

If severe strains are detected, the whole orchard shall be removed where the percentage of infected plants

is > 10%.

### 3.2 - Commercial citrus orchards located in infected areas

If severe strains are detected, the whole orchard shall be removed where the percentage of infected plants is > 10%.

### 3.3 - Nurseries

Where infected plants are detected in a nursery, the SFR shall:

suspend the licence to use the citrus plant passport;

impose the removal of the infected lot. Where infection percentage is lower than 5% and upon formal request by the nursery owner, the SFR may require that the infected plants alone be destroyed, provided that all the plants belonging to the same lot be individually tested for CTV by an accredited laboratory, pursuant to Ministerial Decree of 14 April 1997. The test shall be conducted at the applicant's expense, as per a schedule established by the SFR, which shall carry out inspections;

carry out surveys to detect the origin of the outbreak, whether from infected budwood or aphid transmission, and impose the relevant phytosanitary measures.

Suspension of the licence to use the plant passport may be lifted after the virus has been eradicated in the focus area, pursuant to article 4(4).

Movement of budwood out of the mother blocks where a CTV infection has been reported shall be suspended for at least 3 consecutive vegetative cycles after destruction of the infected plants. Throughout such period, tests shall be repeated at least twice to confirm absence of CTV.

### 3.4 - Gardens, parks, alleys

Where CTV-infected plants are detected in alleys, gardens, collection blocks, and public or private parks, the infected plants shall be destroyed.

## CHAPTER 4 - CRITERIA TO MAINTAIN THE STATUS OF CTV-FREE PRODUCTION SITE IN A NURSERY

Nurseries located in areas which are not pest-free.

Nurseries located in areas which are not CTV-free may solely produce citrus plants for the establishment of commercial orchards, in accordance with the conditions laid down in Annex IV, Section II of Legislative Decree No 214/2005, point 10(b) stating that:

b) the plants comply with a certification system requiring that they be directly derived from budwood, stored under adequate conditions, and officially tested for (European strains of) Citrus Tristeza Virus, by means of appropriate indicator plants or equivalent methods validated as per article 18, paragraph 2, grown in an insect-proof greenhouse or in an isolated screen-house, and no symptoms of (European strains of) Citrus Tristeza Virus have been observed.

Nurseries located in areas which are not CTV-free may produce citrus plants to be moved to infected areas alone, also in accordance with the conditions laid down in Annex IV, Section II of

Legislative Decree No 214/2005, point 10(c) stating that:

c) the specified plants:

comply with a certification system requiring that they be directly derived from budwood, stored under adequate conditions, officially tested for (European strains of) Citrus Tristeza Virus - by means of appropriate indicator plants or equivalent methods validated as per article 18, paragraph 2, -found free of European strains of Citrus Tristeza Virus and as such certified by individual tests conducted in accordance with the methods referred to in this paragraph, inspected and found free of symptoms of (European strains of) Citrus Tristeza Virus since the last full vegetative cycle.

In order to be marketed, such production shall be cleared by the responsible SFR and comply with the following prescriptions:

the plants shall be identified in lots, clearly separated from other productions;

the lots shall be identified in the official maps of the nursery;

all plants shall be individually tested for CTV at the nurseryman's expense, prior to be marketed;

plants to be marketing shall be accompanied by a plant passport stating that they are «solely intended for CTV-infected areas» and show after the serial number, separated by a hyphen, the «INS» code;

the produced plants shall be directly intended for the end user, whose identification details have been previously notified to the responsible SFR of the place of destination, together with the details concerning the municipality, the land registry map sheet and parcel or alternatively GPS coordinates of the planting site;

where laboratory tests confirm CTV-infection, the SFR at the place of destination may require additional and more appropriate traceability solutions.

Plants intended for ornamental purposes may be produced in accordance with the conditions laid down in Annex IV, Section II of Legislative Decree No 214/2005, point 10(b) or (c).

Plants to be grown under insect-proof greenhouses shall be cultivated in separate areas: seedbeds, grafting area, lots to be marketed, etc., with aphid-proof net, double entry door and a 1m large headhouse.

Aphid control shall be ensured at every stage of the production cycle through appropriately scheduled control methods.

## CHAPTER 5 – NOTICE OF ESTABLISHMENT OF A NEW PLANTING

Businesses which establish new citrus plantings shall notify to the responsible Plant Protection Service, within 120 days of planting, the identification details of the company (name, registered office and VAT No.), and the location of the new planting by providing Land Registry data (municipality, map sheet and parcels) or GPS coordinates. They shall also notify the species, the variety and the number of planted plants, and details of passport/marketing documents.

Businesses, municipalities, private individuals establishing ornamental citrus-growing areas shall notify to the responsible Plant Protection Service, within 120 days of planting, the species, the variety and the number of planted plants, and details of passport/marketing documents.