

Control of area of Vineyard parcels

Guidelines for measuring the area of vineyard parcels in the context of Regulations (EC) No 479/2008 and 555/2008

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EUR 23524 EN - 2008

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JRC 46949

EUR 23524 EN
ISSN 1018-5593

Luxembourg: Office for Official Publications of the European Communities

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Printed in Italy

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"The guidelines and examples given in this document cannot be considered as an official interpretation of the legislation. Such an interpretation can only be made by the judicial services - in this case, national courts and the Court of Justice of the European Communities."

1. Introduction

The purpose of this document is to establish guidelines on area measurement of vineyard parcels in the context of Regulations (EC) N° 479/2008 and 555/2008 on the Common Organization of the wine Market.

Four of the support measures of Council Regulation 479/2008 are paid on an area basis: the single payment scheme on the one hand, and the restructuring and conversion, green harvesting and grubbing-up measures on the other hand (called the “3 measures” or the "3 aid schemes" in the remainder of the document).

In contrast with the Single Payment Scheme, the very high premiums granted for restructuring, conversion and grubbing-up measures (6000 to 12000 €/ha for restructuring and conversion and from 1400 to 15 000 €/ha for grubbing-up) justify specific control procedures:

- 100% of the claims have to be checked administratively and On-The-Spot (OTS);
- In general two field inspections are required, one before and one after the grubbing-up or restructuring operation.

Thus the existing recommendations for the on the spot checks of areas in the context of R. 796/2004 in WikiCAP (<http://marsmap.jrc.it/romuald/mediawiki/index.php/Category:Art30>) need to be adapted to the specific context of Vineyards.

2. Control of area of vineyard parcels

2.1. General principles of control in the wine sector

Member States shall define methods and means for verification of claims and specify which claims shall be subject to checks (Art.76(d) of R 555/2008).

Verification of claims shall be carried out by administrative and where appropriate on-the-spot checks (art 77(1) of R. 555/2008). Administrative checks shall be systematic (100%) and shall include cross-checks with data from the IACS, vineyard register, etc.

On-the-spot checks are:

- Either systematic (100 % of claims) for restructuring and conversion (art 9(1) first subparagraph and art. 81(2) of R 555/2008), green harvesting (Art. 12(1) d of R. 555/2008) and grubbing up premiums (Art. 81(3) of R 555/2008¹);
- Or carried out by sampling at least 5 % of aid applications on the basis of a risk analysis (and a random sample where controls concern specifically Community financing) in accordance with Article 79 of R. 555/2008. For what regards the SPS, the sampling is made on all SPS claims and not only on the vineyard holdings claiming SPS.

¹ The pre-grubbing up OTS check may be based on a 5% sample (instead of 100%) if MS is able to check the parcel area in accordance with the definition of art. 75 of Reg. 555/2008 and the parcel being properly tended administratively on the basis of the computerized vineyard register (same article).

Article 80 of R. 555/2008 specifies that every on-the-spot check requires the completion of a control report. The main attributes of this control report for the four support measures listed above are the following:

- the agricultural areas checked
- the agricultural areas measured
- the results of the measurements per parcel measured
- the measurement method used
- verification of whether the given area has been properly tended in the case of grubbing-up scheme.

According to Article 80 (2) of R 555/2008 where discrepancies are observed between the information in the application and the actual situation found during the check on the spot or by remote sensing, the farmer shall receive a copy of the control report and shall have the opportunity to sign it before the competent authority draws its conclusions from the findings with regard to any resulting reductions or exclusions.

2.2. Area to be measured

Art. 75 of R. 555/2008 define the vineyard parcel for the purpose of the restructuring and conversion, green harvesting and grubbing-up schemes as:

The area planted with vines defined by the external perimeter of the vine stocks with the addition of a buffer whose width corresponds to half of the distance between the rows (see Figure 1). The buffer mentioned here is an area added in order to take account of the root area of the plants. It must not be mistaken with the buffer tolerance linked to the measurement tool (see technical tolerance Par. 2.3).

This area shall be determined in accordance with the first subparagraph of Article 30(1) of R. 796/2004 (Art. 75 of R. 555/2008) i.e. “the agricultural parcel areas shall be determined by any means proven to assure measurement of quality at least equivalent to that required by applicable technical standard, as drawn up at Community level”.

For vineyard parcels claimed for SPS, article 30 of R. 796/2004 applies.

The area has to be projected in the national geodetic system.

2.3. Use of technical tolerance

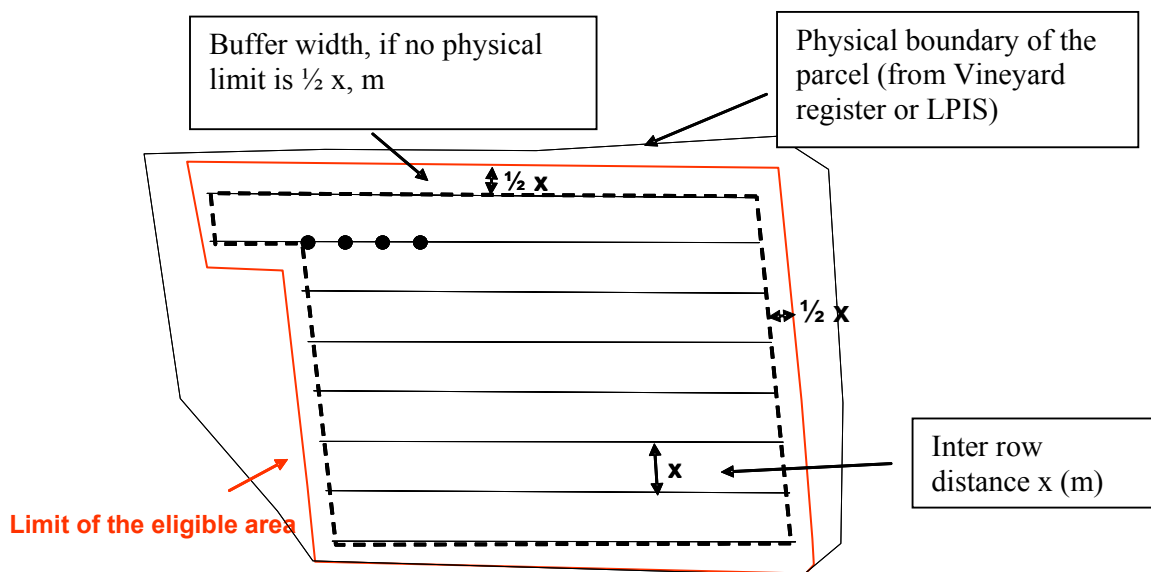
For vineyard parcels claimed for SPS, the area shall be determined according to art 30 of R. 796/2004. In particular a buffer tolerance of maximum 1.5m around the parcel perimeter (capped to 1.0 ha) shall be defined.

For the 3 aid schemes, only the first subparagraph of Art. 30(1) of R. 796/2004 applies, therefore no measurement tolerance is defined by the regulation for the vineyard area measurements (for instance no maximum absolute tolerance is defined). Moreover, for the 3 aid schemes, the control is **systematic** and **no penalty** is foreseen in case of **over declaration of the area** (in contrast with SPS). Therefore the application of a tolerance is not needed. It is clearly not

necessary when farmers are not requested to declare an area. However, in MS where farmers are requested to declare an area, MS may define a tolerance in order to be consistent with IACS. This tolerance will be used to decide whether the area “declared” by the farmer is correct or not.

In any case, MS are advised to use a **precise measurement tool**. Tools that have been proven to have a buffer width lower than 0.75 m are recommended.

Figure 1: Schematic view of the vineyard area eligible for the 3 aid schemes according to art. 75 (red line)



For vineyard parcels claimed for SPS however, the standard procedure (i.e. a maximum tolerance of 1.5m around the parcel perimeter, up to an absolute maximum of 1 ha) applies. Moreover, the area eligible for SPS may be larger than the planted area defined by art. 75 of R 555/2008 (e.g. may include headrows provided these are in GAEC).

2.4. Parcel measurement method: general case

For the general case of regularly planted and homogeneous vineyard parcels, the different steps in the field measurements are:

A. Location of the parcel

The first task of the controller is to verify that he is located on the right parcel. This is done either by locating the parcel on a cadastre map, an orthophoto map or by measuring a point in the parcel using a GPS and referring it to an appropriate map.

B. Measurement of the area covered by vine plants

For the 3 aid schemes, as a general rule, it is recommended to perform the measurement following strictly the limit of the planted area, as this limit is well defined and in most cases easier to identify than the “article 75” area. Then the area corresponding to the half-row distance is added all round the parcel in order to take into account the extension of the roots (half row distance multiplied by the perimeter of the measured area). Alternatively, walking at a half-row distance from the external perimeter of the vine

stocks is allowed when it results in an easier and more precise measurement than following strictly the vine stocks (in this case, the half-row distance around the perimeter is already included in the measured area). The inter-row distance could be assessed by taking the distance between n rows (e.g. 5 or 10) and dividing it by n-1. If some physical boundary around the parcel (wall, rock, edge, road...) intersects with the inspector's trajectory, this limit will be followed (see red line in Figure 1).

For parcels claimed for SPS, the general guidelines apply (see <http://marsmap.jrc.it/romuald/mediawiki/index.php/Category:Art30>).

C. Application of a technical tolerance.

A technical tolerance may then be applied to assess whether the declared or the measured area should be retained (see "Determination of the parcel area, use of the technical tolerance" under http://marsmap.jrc.it/romuald/mediawiki/index.php/Area_measurement). This technical tolerance will be applied to the parcel measured in step B i.e. using the red line as perimeter multiplied by the buffer width corresponding to the technical accuracy of the measurement tool (see http://marsmap.jrc.it/romuald/mediawiki/index.php/Technical_tolerance).

D. Control of the declared area

After having computed the tolerance, the difference between the measured area and the declared area is calculated. If the difference is less than the technical tolerance, the declared value will be accepted. If the difference is greater than the tolerance, the measured area is retained for the payment and/or appropriate follow up action must be taken to deal with the over- or under-declaration.

2.5. Parcel measurement methods for specific cases

Additional provisions could be defined by the MS for specific cases:

Single row

The vineyard area may be calculated by taking the row length and adding up to a maximum of 1.5 meter buffer all round, with regional exceptions to be justified by the MS.

Individual vine plants

The maximum corresponding eligible area is fixed at 5 m² per stock, with possible regional exceptions to be justified.

Inclusions and holes

An inclusion means any feature inside the vineyard parcel which is not eligible for the aid (e.g. road, building, water basin, tree rows...); whereas holes are defined as areas inside the parcel with no vine plants or other features.

As a general rule (especially for the 3 aid schemes), inclusions above 100 m² have to be excluded from the planted area. Inclusions below 100 m² will be excluded if their total area is significant with respect to the parcel area, i.e. if their total area exceeds an area equal to the tolerance applicable to the parcel (i.e. the product of the parcel perimeter by the buffer width of the tool). In particular, the area of internal roads used by the tractors for the cultivation which falls outside the planted area (cf. art. 75), as well as permanent constructions, should always be deducted from the eligible area. Isolated trees could be counted as vineyard area provided that (1) they are not subsidized, (2) allow the

production as on a parcel without trees and (3) do not exceed the density of 40 trees per hectare.

Holes should also be excluded as, theoretically, the producer has to fill these gaps with new plants. However, a certain amount of missing plants (e.g. 1 out of 10 plants) may be accepted as part of the vineyard area, provided the gaps are well distributed in the parcel.

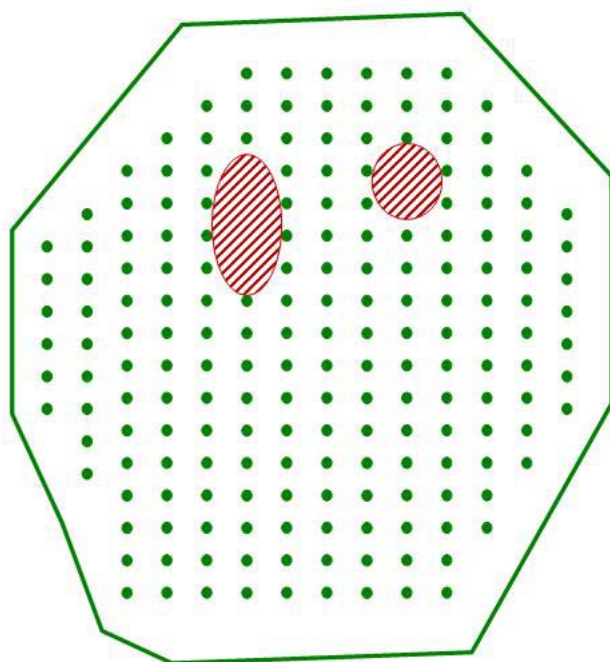
Particular case of inclusions of other crops

As a general rule, other crop areas should be excluded from the vine area.

For olive trees and nuts, an official area may be recorded in the IACS-GIS. Where the IACS-GIS is up to date for these 2 crops, their corresponding area may be used to derive the vineyard area. In such cases, the vine planted area will be computed by subtracting the official olive or nuts area from the vineyard area measured according to the general method described in part B (see Figure 2).

Alternatively, each single piece of land covered by a specific species should be measured (e.g. measuring the radius or diameter of the crown of trees) and deducted from the vineyard area.

Figure 2: Inclusions of olive trees in a vineyard parcels (olive areas according to the IACS GIS are in red)

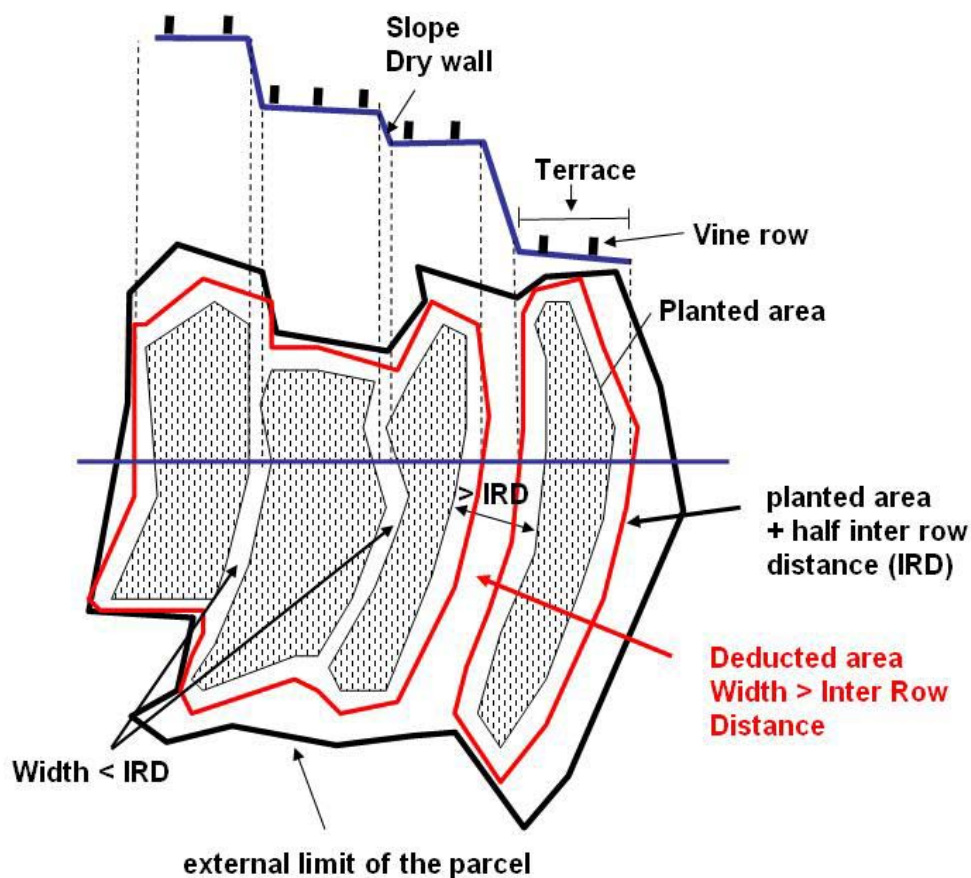


Terraces

For the 3 aid schemes, the same principle as for flat areas applies: a half inter row buffer is added around the vine rows of each terrace; where these buffers intersect in a 2D space (i.e. where the distance between the closest rows of two adjacent terraces is less than the inter row distance) the terraces are merged (see Figure 3); otherwise they are measured separately following the general rule. The final parcel area is obtained by summing the measured areas. This approach may lead to a high tolerance as a result of the exclusion of inter-terrace areas (unusable slopes or walls), when such a tolerance is applied.

NB: for SPS, terraces may be considered eligible according to art 30(2) and/or 30(3) of R. 796/2004.

Figure 3: Area measurement of vineyard on terraces. The red line delineates the vineyard area according to art. 75.



2.6. Parcel measurement tools

The general principle is that parcel areas shall be determined by any means proven to assure measurement of quality at least equivalent to that required by applicable technical standard, as drawn up at Community level.

➤ **Field measurement**

Details of the different tools for area and length measurement are regularly updated in WikiCAP (see <http://marsmap.jrc.it/romuald/mediawiki/index.php/Category:Art30>). They are applicable in the case of measurement of Vineyard parcels with some specific recommendations.

Stand alone GPS:

Considering the level of accuracy recommended for the 3 aid schemes, standalone GPS with a technical tolerance of 1,25m is presently not considered suitable. However, since some stand alone GPS devices may reach this accuracy, Member States are advised to determine the accuracy of their equipment through an area measurement validation test.

Differential GPS, geodetic survey GPS or Total station

In order to reach the recommended accuracy, accurate tools such as Differential GPS² (DGPS) or geodetic survey instruments (single or dual frequency phase GPS, electronic total station) are necessary. Such equipment should allow the use of technical tolerances of up to 75 cm.

Wheel, tape, Topofil, Laser meter

For rectangular parcels (in particular narrow parcels or single rows) or simple shapes whose area can be measured through a limited number of lengths, specific tools can be used such as wheel, tape, topofil, and Laser meter. For such measurements, a tolerance appropriate to the tool used should be applied where necessary (this tolerance, which will have to be determined by the MS, is expected to be small).

When using instruments to measure lengths in sloped areas, care should be taken to use instruments able to derive a projected area. Preference should be given to instruments that perform this correction automatically.

➤ Ortho imagery

In case of grubbing up premium, verification or measurement (in case of partial grubbing up) of the grubbed up area may be carried out either in the field or using remote sensing ortho-imagery. Orthorectified imagery with a pixel resolution of at least 1m and preferably better than 50 cm could be used, provided that the area grubbed up is clearly visible on the imagery (i.e. no late autumn, winter or early spring images); it is advised to check that vine plants in the parcel or the neighbourhood are visible on the image as, under certain conditions, areas with vine plants may appear as in bare soil.

NB: Orthorectified imagery with a pixel resolution of at least 1m, preferably 50 cm or less could be also used to measure inclusions to be removed (trees, pathways ...), providing the limits of these features are clearly distinguishable on the imagery.

² The principle of the DGPS is based on the use of 2 receivers. One is placed on a known (very accurately surveyed) reference point and used as reference station and the other (the rover) is used for measuring the parcel. Differential GPS corrections can be applied to the rover measurements in real time in the field or post processed at the office.

Summary Table 1 gives an overview of the general issues concerning control of area-based measurements of vineyards and proposals of different methods and tools for area measurements (SPS, restructuring and conversion, green harvesting and grubbing-up scheme) in compliance with Regulations CE 479/2008 and 555/ 2008.

Table 1: Summary table on area measurements on Vineyards

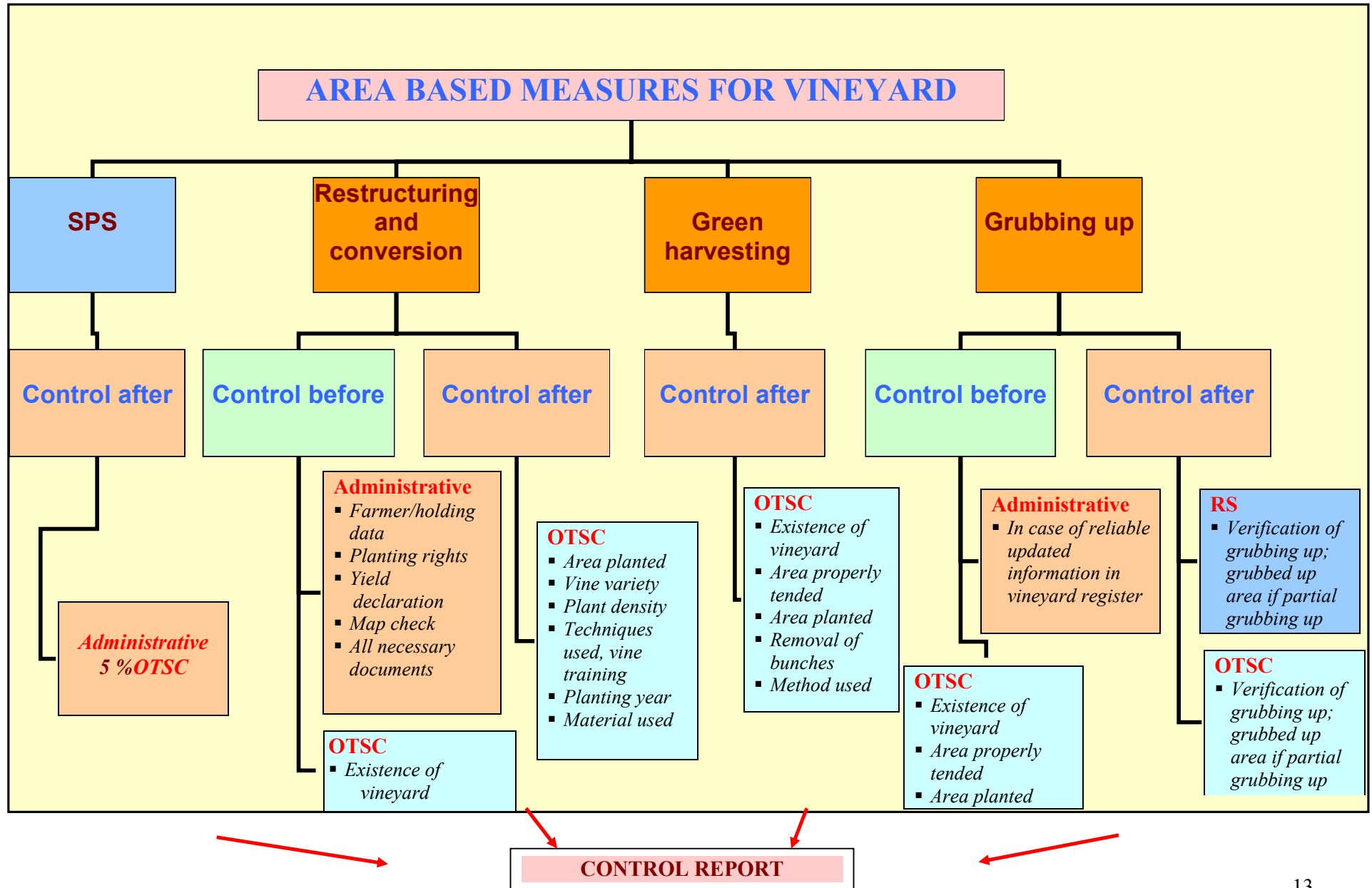
Support program	SPS	Restructuring and conversion	Green harvesting	Grubbing up
Activities/procedures				
1. Control rate	<p>>= 5 %</p> <p>R 796/2004</p>	<p>100 %</p> <p>(Art 9(1) first subparagraph and Art 81(2) – R. 555/2008)</p> <p>➤ 5% before grubbing up in case that MS disposes of a reliable updated computerized vineyard register (Art. 81 (2) paragraph 3).</p>	<p>100 %</p> <p>(Art. 12 (1)d of R. 555/2008)</p>	<p>100 %</p> <p>(Art. 81(3) of R. 555/2008)</p> <p>➤ 5% before grubbing up in case that MS disposes of (1) a graphical tool that allows measurement of the parcel in accordance with Article 75 of R. 555/2008 in the vineyard register and (2) of reliable updated information about the parcel being properly tended (Art. 81, (3), paragraph 3).</p>

<p>2. Checks to be made before operation</p>	<p>SPS administrative control</p>	<p>Administrative control</p> <p>Verification of data included in vineyard dossier, i.e.:</p> <ul style="list-style-type: none"> ➤ Farmer's data ➤ Vineyard holding existence ➤ Planting rights existence ➤ Documents proving the ownership, lease or rent ➤ Checks on the map, ortophoto of parcels claimed ➤ Minimal size of the parcel and holding ➤ Existence of all necessary documents /conditions requested for activating of payment, defined by MS <p>On the spot inspection</p> <ul style="list-style-type: none"> ➤ Verification of the existence of the vineyard 	<p>Administrative control</p> <p>Check that parcel has not been green harvested in the previous year (art 12(2) of R. 555/2008)</p>	<p>Administrative control</p> <ul style="list-style-type: none"> ➤ Verification of the existence of the vineyard ➤ Check that the area is properly tended (yield declarations if available) ➤ Determination of the planted area in case the MS has a graphical tool that allows measurement of the parcel in accordance with Art. 75 in the vineyard register <p>On the spot inspection</p> <ul style="list-style-type: none"> ➤ Check that the area is properly tended (if harvest declarations are not available) ➤ Determination of the planted area in accordance with art. 75 of R. 555/2008 (for 100% of the claims if MS has no GIS allowing the measurement of the planted area, or 5% otherwise)
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<p>3. Checks to be made after operation</p>	<p>Check of area and GAEC as for any parcel claimed for SPS</p>	<p>On the spot inspection</p> <ul style="list-style-type: none"> ➤ Determination of the planted area in accordance with art. 75 of R. 555/2008 ➤ vine variety ➤ plant density ➤ technique used (vine training) ➤ the year of planting or grafting-on ➤ the material used to fix the vines in case of restructuring ➤ Invoices/document for purchasing of stake, planting stock, wire, etc 	<p>On the spot inspection</p> <ul style="list-style-type: none"> ➤ Verification of the existence of the vineyard parcel ➤ Check that the area is properly tended ➤ Determination of the planted area in accordance with art. 75 of R. 555/2008 ➤ Check the removal or destruction of all branches ➤ check method used for removal (manual, mechanical or chemical) and evidence of operation cost <p>OTS check to be carried out between 15 June and 31 July and completed before “Veraison”</p>	<p>On the spot:</p> <ul style="list-style-type: none"> ➤ Verification that grubbing-up has effectively taken place ➤ Area measurement if partial grubbing up <p>alternatively by remote sensing</p> <ul style="list-style-type: none"> ➤ Check that the entire parcel has been grubbed up ➤ or for partially grubbed up parcels, measurement of vineyard area (i.e. area not grubbed up) if the resolution \leq 1m <p>resolution (GSD) \leq 0.5m is recommended</p> <p>(art 81(4) of R. 555/2008)</p> <p>OTS check to be carried out at a time allowing payments to be made at the latest by 15 October (art 72 of R. 555/2008)</p>
<p>4. Technical tolerance (if to be used)</p>	<p>Max 1.5 m (Art. 30 of R 796/2003)</p>	<p>Max 0.75 m recommended</p>	<p>Max 0.75 m recommended</p>	<p>Max 0.75 m recommended</p>

<p>5. Measurement tools</p> <p>5.1. RS</p> <p>5.2. Physical field measurement</p>	<p>as for any parcel claimed for SPS,</p> <p>Remote sensing resolution is equal or better than 1 m</p> <ul style="list-style-type: none"> ➤ Standalone ➤ DGPS 	<p>N/A</p> <ul style="list-style-type: none"> ➤ Tape ➤ DGPS ➤ Geodetic survey instruments - single or dual frequency phase GPS, total stations 	<p>N/A</p> <ul style="list-style-type: none"> ➤ Tape ➤ DGPS ➤ Geodetic survey instruments - single or dual frequency phase GPS, total stations 	<p>For control of grubbing up if resolution of remote sensing is equal or better than 1 m (art 81(4) of R. 555/2008); 0.5m resolution or better recommended</p> <ul style="list-style-type: none"> ➤ Tape ➤ DGPS ➤ Geodetic survey instruments - single or dual frequency phase GPS, total stations
<p>6. Documents used during the control/inspection</p>	<ul style="list-style-type: none"> ➤ Map extract of vineyard register (if existing) ➤ Ortophoto ➤ Control report 	<ul style="list-style-type: none"> ➤ Map extract of vineyard register ➤ Ortophoto ➤ Control report 	<ul style="list-style-type: none"> ➤ Map extract of vineyard register ➤ Ortophoto ➤ Control report 	<ul style="list-style-type: none"> ➤ Map extract of vineyard register ➤ Ortophoto ➤ Control report

GENERAL METHODOLOGY FOR CONTROL OF DIFFERENT SUPPORT MEASURES UNDER R. 479 and 555/2008



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Luxembourg: Office for Official Publications of the European Communities
2008 – 18 pp. – 21 x 29.7 cm
EUR – Scientific and Technical Research series – ISSN 1018-5593

Abstract

The European Regulations on the Common Organization of the wine Market CE 479/2008 and 555/2008 include a number of measures to control plantation rights and grant premiums for different schemes as: SPS, restructuring and conversion, green harvesting and grubbing-up.

The corresponding subsidies are area-based and current guidelines aims to provide recommendations of the general issues concerning control of vineyard parcels and proposals of methods and tools for general case of area measurement as well as for specific cases concerning vineyards: single row, individual vine plants, inclusions and holes, associated crops and terraces.

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