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Ces principes directeurs d'examen ont été remplacés par une version ultérieure. La version adoptée la plus récente des principes directeurs d'examen figure à l'adresse suivante : [http://www.upov.int/test\\_guidelines/fr/list.jsp](http://www.upov.int/test_guidelines/fr/list.jsp)

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Diese Prüfungsrichtlinien wurden durch eine neuere Fassung ersetzt. Die neueste angenommene Fassung von Prüfungsrichtlinien ist unter [http://www.upov.int/test\\_guidelines/en/list.jsp](http://www.upov.int/test_guidelines/en/list.jsp) zu finden.

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Las presentes directrices de examen han sido reemplazadas por una versión posterior. La versión de las directrices de examen de más reciente aprobación está disponible en [http://www.upov.int/test\\_guidelines/es/list.jsp](http://www.upov.int/test_guidelines/es/list.jsp).

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TG/50/8

INTERNATIONAL UNION  
FOR THE PROTECTION  
OF NEW VARIETIES OF  
PLANTS

UNION INTERNATIONALE  
POUR LA PROTECTION  
DES OBTENTIONS  
VÉGÉTALES

INTERNATIONALER  
VERBAND ZUM SCHUTZ  
VON PFLANZEN-  
ZÜCHTUNGEN

UNIÓN INTERNACIONAL  
PARA LA PROTECCIÓN  
DE LAS OBTENCIONES  
VEGETALES

**GUIDELINES**  
**FOR THE CONDUCT OF TESTS**  
**FOR DISTINCTNESS, UNIFORMITY AND STABILITY**

**GRAPEVINE**

*(Vitis L.)*

**GENEVA**  
**1999**

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## **GUIDELINES**

### **FOR THE CONDUCT OF TESTS**

#### **FOR DISTINCTNESS, UNIFORMITY AND STABILITY**

**GRAPEVINE**

*(Vitis L.)*

These Guidelines should be read in conjunction with document TG/1/2, which contains explanatory notes on the general principles on which the Guidelines have been established.

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## I. Subject of these Guidelines

These Test Guidelines apply to all vegetatively propagated varieties of *Vitis* L. including rootstock and ornamental varieties.

## II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the plant material required for testing the variety is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must make sure that all customs formalities are complied with. As a minimum, the following quantity of plant material is recommended:

15 plants on their own roots.

2. In the case of a variety with roots sensitive to *Phylloxera vastatrix* scions should be grafted on a rootstock variety not being sensitive to that pest selected by the competent authorities. If accepted by the competent authority, the applicant could exceptionally submit scions for grafting, sufficient to propagate 15 plants (to be sent at grafting time) or 15 plants on their own roots. If accepted by the competent authority, in some special cases, also plants grown in cardboard pots or peat pots can be used. Plant material from *in vitro* propagation should only be submitted if agreement from the competent authority has been obtained beforehand. The plant material supplied should be visibly healthy, not lacking in vigor or affected by any important pests or diseases.

3. The plant material must not have undergone any treatment unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

## III. Conduct of Tests

1. To assess distinctness it is essential that the plants under test should produce at least two satisfactory crops of fruit.

2. The tests should normally be conducted at one place. If any important characteristics of the variety cannot be seen at that place, the variety may be tested at an additional place.

3. The tests should be carried out under conditions ensuring normal growth. The size of the plots should be such that plants or parts of plants may be removed for measurement and counting without prejudice to the observations which must be made up to the end of the growing period. Each test should include a total of 15 plants. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions.

4. Additional tests for special purposes may be established.

#### IV. Methods and Observations

1. All observations should be made on 10 plants or parts taken from 10 plants.
2. For the assessment of uniformity a population standard of 1% with an acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, the maximum number of off-types allowed would be 1.
3. Unless otherwise indicated, all observations on the shoot should be made in the middle third of the shoot. All observations on the mature leaf should be made on leaves in the middle third of the shoot just above the raceme.
4. Wherever possible, all characteristics on the bunch and the berry should apply also to varieties not for fruit production.

#### V. Grouping of Varieties

1. The collection of varieties to be grown should be divided into groups to facilitate the assessment of distinctness. In the first place the collection should be divided into varieties for fruit production and not for fruit production.
2. In addition, characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety. Their various states of expression should be fairly evenly distributed throughout the collection. It is recommended that the competent authorities use the color of the skin of the berry (characteristic 41) for grouping varieties.

#### VI. Characteristics and Symbols

1. To assess distinctness, uniformity and stability, the characteristics and their states as given in the Table of Characteristics should be used.
2. Notes (numbers), for the purposes of electronic data processing, are given opposite the states of expression for each characteristic.
3. The indication of a species or a group of varieties in the column "Example Varieties" indicates that the majority of the varieties—but not necessarily all varieties—of this species or group show the state of expression of that characteristic.
4. For the example varieties—other than rootstocks—after the name of the variety the color of the berry is indicated, following the standardized code used by the European Union for the European classification of vine varieties: B = white, G = grey, N = black, Rg = red, Rs = rose. Synonyms of certain example varieties used are indicated at the end of Chapter VIII before the table with the growth stages.
5. In a special column for each characteristic are indicated the code numbers of the OIV and IPGRI of the corresponding characteristic in the Descriptor list for grapevine varieties and

*Vitis* species, drawn up jointly by the OIV (International Office of the Vine and Wine, 18, rue d'Aguesseau, 75008 Paris, France), IPGRI (International Plant Genetic Resources Institute, Via delle Sette Chiese 142, 00145 Rome, Italy) and UPOV, in order to avoid risks of mistakes and errors resulting from the multiplicity and heterogeneity of existing lists of distinctive characteristics. In addition, for each characteristic, a code is indicated for the stage of development at which observations should be made. The code is taken from the table: "Encoding and description of the phenological stages of the grapevine according to the extended BBCH scale" reproduced at the end of Chapter VIII.

## 6. Legend

(\*) Characteristics that should be used on all varieties in every growing period over which examinations are made and always be included in the variety descriptions, except when the state of expression of a preceding characteristic or regional environmental conditions render this impossible.

(+) See Explanations on the Table of Characteristics in Chapter VIII.

<sup>1)</sup> The optimum stage of development for the assessment of each characteristic according to the BBCH Code as well as the codes for characteristics used by the OIV (O-...) and the IPGRI (I-...) are indicated by numbers in the second column. The stages of development denoted by a number of the BBCH Code are described at the end of Chapter VIII.



VII. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. (*)	<b>07-09</b> <b>O-301</b> <b>I-7.1.1</b>	<b><u>Only varieties for fruit production:</u></b> <b>Time of bud burst (50% of buds on 50% of plants)</b>	<b><u>Seulement variétés destinées à la production de fruits:</u></b> Époque de débourrement (50% des bourgeons sur 50% des plantes)	<b><u>Nur Sorten zur Fruchterzeugung:</u></b> Zeitpunkt des Knospenaufbruchs (50% der Knospen bei 50% der Pflanzen)	<b><u>Sólo variedades para la producción de fruta:</u></b> Época de desborre (50% de las yemas en 50% de las plantas)		
		very early	très précoce	sehr früh	muy temprana	Perle de Csaba B	1
		early	précoce	früh	temprana	Chasselas blanc B	3
		medium	moyenne	mittel	media	Grenache noir N	5
		late	tardive	spät	tardía	Cinsaut N	7
		very late	très tardive	sehr spät	muy tardía	Mourvèdre N	9
2. (*)	<b>07-09</b> <b>O-301</b> <b>I-7.1.2</b>	<b><u>Only varieties not for fruit production:</u></b> Time of bud burst (as for 1)	<b><u>Seulement variétés non destinées à la production de fruits:</u></b> Époque de débourrement (comme pour 1)	<b><u>Nur Sorten nicht zur Fruchterzeugung:</u></b> Zeitpunkt des Knospenaufbruchs (wie unter 1)	<b><u>Sólo variedades no utilizadas para la producción de fruta:</u></b> Época de desborre (como para 1)		
		very early	très précoce	sehr früh	muy temprana		1
		early	précoce	früh	temprana		3
		medium	moyenne	mittel	media		5
		late	tardive	spät	tardía		7
		very late	très tardive	sehr spät	muy tardía		9
3. (*) (+)	<b>53-69</b> <b>O-001</b> <b>I-6.1.1</b>	<b>Young shoot: openness of tip</b>	<b>Jeune rameau: ouverture de l'extrémité</b>	<b>Junger Trieb: Öffnung der Triebspitze</b>	<b>Pámpano: apertura de la extremidad</b>		
		closed	fermée	geschlossen	cerrado	<i>Vitis riparia</i>	1
		slightly open	légèrement ouverte	leicht offen	ligeramente abierto		2
		half open	demi-ouverte	halb offen	semi abierto	Kober 5 BB	3
		wide open	largement ouverte	weit offen	muy abierto		4
		fully open	complètement ouverte	vollständig offen	completamente abierto	<i>Vitis vinifera</i>	5

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
4. (* (+)	<b>53-69</b> <b>O-004</b> <b>I-6.1.3</b>	<b>Young shoot: density of <u>prostrate</u> hairs on tip</b>	<b>Jeune rameau: densité des poils <u>couchés</u> de l'extrémité</b>	<b>Junger Trieb: Dichte der <u>Woll</u>-<u>behaarung</u> an der Triebspitze</b>	<b>Pámpano: densidad de los pelos <u>postrados</u> de la extremidad</b>		
		absent or very sparse	nulle ou très faible	fehlend oder sehr locker	nula o muy laxa	3309 Couderc	1
		sparse	faible	locker	laxa	Chasselas blanc B	3
		medium	moyenne	mittel	media	Pinot noir N	5
		dense	forte	dicht	densa	Gewürztraminer Rs	7
		very dense	très forte	sehr dicht	muy densa	Meunier N	9
5. (* (+)	<b>53-69</b> <b>O-003</b> <b>I-6.1.2</b>	<b>Young shoot: anthocyanin coloration of <u>prostrate</u> hairs on tip</b>	<b>Jeune rameau: pigmentation anthocyanique des poils <u>couchés</u> de l'extrémité</b>	<b>Junger Trieb: An-thocyanfärbung der <u>Woll</u>behaarung an der Triebspitze</b>	<b>Pámpano: pigmentación antociánica de los pelos <u>postrados</u> de la extremidad</b>		
		absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Furmint B	1
		weak	faible	gering	débil	Riesling B	3
		medium	moyenne	mittel	media	Barbera N	5
		strong	forte	stark	fuerte	Cabernet Sauvignon N	7
		very strong	très forte	sehr stark	muy fuerte	<i>Vitis aestivalis</i>	9
6. (+)	<b>53-69</b> <b>O-005</b> <b>I-6.1.4</b>	<b><u>Only varieties not for fruit production</u>: Young shoot: density of <u>erect</u> hairs on tip</b>	<b><u>Seulement variétés non destinées à la production de fruits</u>: Jeune rameau: densité des poils <u>dressés</u> de l'extrémité</b>	<b><u>Nur Sorten nicht zur Fruchterzeugung</u>: Junger Trieb: Dichte der <u>Borsten</u>behaarung an der Triebspitze</b>	<b><u>Sólo variedades no utilizadas para la producción de fruta</u>: Pámpano: densidad de los pelos <u>erguidos</u> de la extremidad</b>		
		absent or very sparse	nulle ou très faible	fehlend oder sehr locker	nula o muy laxa	Rupestris du Lot	1
		sparse	faible	locker	laxa	3309 Couderc	3
		medium	moyenne	mittel	media	3306 Couderc	5
		dense	forte	dicht	densa	<i>Vitis riparia</i>	7
		very dense	très forte	sehr dicht	muy densa	<i>Vitis cinerea</i>	9

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
7. (* (+)	<b>53-69</b> <b>O-051</b> <b>I-6.1.16</b>	<b>Young leaf: color of <u>upper</u> side of blade</b>	<b>Jeune feuille: couleur de la face <u>supérieure</u> du limbe</b>	<b>Junges Blatt: Farbe der <u>Ober-</u>seite der Spreite</b>	<b>Hoja joven: color del <u>haz</u> del limbo</b>		
		yellow green	verte jaune	gelbgrün	verde amarillo	Sylvaner B	1
		green with anthocyanin spots	vert à plages anthocyaniques	grün mit Anthocyanflecken	verde con zonas antociánicas	Riesling B	2
		light copper-red	rouge cuivré clair	hellkupferrot	rojo-cobrizo claro	Kober 5 BB	3
		dark copper-red	rouge cuivré foncé	dunkelkupferrot	rojo-cobrizo oscuro	Chasselas blanc B	4
		wine-red	rouge vineuse	weinrot	rojo vino	Deckrot N	5
8. (+)	<b>53-69</b> <b>O-053</b> <b>I-6.1.17</b>	<b>Young leaf: density of <u>prostrate</u> hairs <u>between</u> main veins on <u>lower</u> side of blade</b>	<b>Jeune feuille: densité des poils <u>cou-</u>chés <u>entre</u> les nervures principales de la face <u>inférieure</u> du limbe</b>	<b>Junges Blatt: Dichte der <u>Woll-</u>behaarung <u>zwi-</u>schen den Hauptnerven auf der <u>Unterseite</u> der Spreite</b>	<b>Hoja joven: densidad de los pelos <u>pos-</u>trados <u>entre</u> los nervios principales del <u>envés</u> del limbo</b>		
		absent or very sparse	nulle ou très faible	fehlend oder sehr locker	nula o muy laxa	Rupestris du Lot	1
		sparse	faible	locker	laxa	Cinsaut N	3
		medium	moyenne	mittel	media	Carignan N	5
		dense	forte	dicht	densa	Clairette B	7
		very dense	très forte	sehr dicht	muy densa	<i>Vitis labrusca</i>	9

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
9.	<b>53-69</b> <b>O-056</b> (+) <b>I.6.1.20</b>	<b>Young leaf: density of <u>erect</u> hairs <u>on</u> main veins on lower <u>side</u> of blade</b>	<b>Jeune feuille: densité des poils <u>dressés</u> <u>sur</u> les nervures principales de la face <u>inférieure</u> du limbe</b>	<b>Junges Blatt: Dichte der <u>Borsten</u>behaarung <u>auf</u> den Hauptnerven auf der <u>Unterseite</u> der Spreite</b>	<b>Hoja joven: densidad de los pelos <u>erguidos</u> <u>sobre</u> los nervios principales del <u>envés</u></b>		
		absent or very sparse	nulle ou très faible	fehlend oder sehr locker	nula o muy laxa	Rupestris du Lot	1
		sparse	faible	locker	laxa	3309 Couderc	3
		medium	moyenne	mittel	media	Riesling B	5
		dense	forte	dicht	densa	Riparia Scribner	7
		very dense	très forte	sehr dicht	muy densa	<i>Vitis cinerea</i>	9
10.	<b>60-69</b> <b>O-006</b> (+) <b>I-6.1.5</b>	<b>Shoot: attitude (before tying)</b>	<b>Rameau: port (avant palissage)</b>	<b>Trieb: Haltung (vor dem Heften)</b>	<b>Sarmiento: porte (antes de ser tutorado)</b>		
		erect	érigé	aufrecht	erecto	Mourvèdre	1
		semi-erect	demi-érigé	halbaufrecht	semierecto	Muscat Ottonel B	3
		horizontal	horizontal	waagrecht	horizontal	Pinot noir N	5
		semi-drooping	demi-retombant	halbhängend	semi-rastrero	Aramon noir N	7
		drooping	retombant	hängend	rastrero	3309 Couderc	9
11.	<b>60-69</b> <b>O-007</b> (+) <b>I-6.1.6</b>	<b>Shoot: color of <u>dorsal</u> side of internode (well illuminated)</b>	<b>Rameau: couleur de la face <u>dorsale</u> de l'entre-nœud (bien éclairée)</b>	<b>Trieb: Farbe der <u>Rückenseite</u> des Internodiums (gut belichtet)</b>	<b>Sarmiento: color de la cara <u>dorsal</u> del entrenudo (bien iluminada)</b>		
		completely green	complètement verte	völlig grün	completamente verde	Sauvignon B	1
		green with red stripes	verte à raies rouges	grün mit roten Streifen	verde con rayas rojas	Carignan N	2
		completely red	complètement rouge	völlig rot	completamente rojo	Riesling B	3

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
12. (* (+)	60-69 O-008 I-6.1.7	<b>Shoot: color of ventral side of internode (without direct sunlight)</b>	<b>Rameau: couleur de la face ventrale de l'entre-nœud (sans éclairage direct)</b>	<b>Trieb: Farbe der Bauchseite des Internodiums (ohne direktes Sonnenlicht)</b>	<b>Sarmiento: color de la cara ventral del entrenudo (sin luz directa)</b>		
		completely green	complètement verte	völlig grün	completamente verde	Sauvignon B	1
		green with red stripes	verte à raies rouges	grün mit roten Streifen	verde con rayas rojas	Carignan N	2
		completely red	complètement rouge	völlig rot	completamente rojo	Madeleine angevine B	3
13. (+)	60-69 O-009 I-6.1.8	<b><u>Only varieties not for fruit production: Shoot: color of dorsal side of node (as for 11)</u></b>	<b><u>Seulement variétés non destinées à la production de fruits: Rameau: couleur de la face dorsale du nœud (comme pour 11)</u></b>	<b><u>Nur Sorten nicht zur Fruchterzeugung: Trieb: Farbe der Rückenseite des Nodiums (wie unter 11)</u></b>	<b><u>Sólo variedades no utilizadas para la producción de fruta: Sarmiento: color de la cara dorsal del nudo (como para 11)</u></b>		
		completely green	complètement verte	völlig grün	completamente verde		1
		green with red stripes	verte à raies rouges	grün mit roten Streifen	verde con rayas rojas		2
		completely red	complètement rouge	völlig rot	completamente rojo	Kober 5 BB	3
14. (+)	60-69 O-010 I-6.1.9	<b><u>Only varieties not for fruit production: Shoot: color of ventral side of node (as for 12)</u></b>	<b><u>Seulement variétés non destinées à la production de fruits: Rameau : couleur de la face ventrale du nœud (comme pour 12)</u></b>	<b><u>Nur Sorten nicht zur Fruchterzeugung: Trieb: Farbe der Bauchseite des Nodiums (wie unter 12)</u></b>	<b><u>Sólo variedades no utilizadas para la producción de fruta: Sarmiento: color de la cara ventral del nudo (como para 12)</u></b>		
		completely green	complètement verte	völlig grün	completamente verde		1
		green with red stripes	verte à raies rouges	grün mit roten Streifen	verde con rayas rojas		2
		completely red	complètement rouge	völlig rot	completamente rojo	Kober 5 BB	3

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>15.</b>	<b>60-69 O-012 I-6.1.11</b>	<b>Shoot: density of <u>erect</u> hairs on internodes</b>	<b>Rameau: densité des poils <u>dressés</u> sur les entre- nœuds</b>	<b>Trieb: Dichte der <u>Borsten</u>behaarung auf den Inter- nodien</b>	<b>Sarmiento: den- sidad de los pelos <u>erguidos</u> sobre los entrenudos</b>		
		absent or very sparse	nulle ou très faible	fehlend oder sehr locker	nula o muy laxa	3309 Couderc	1
		sparse	faible	locker	laxa	161-49 Couderc	3
		medium	moyenne	mittel	media	3306 Couderc	5
		dense	forte	dicht	densa	Riparia Scribner	7
		very dense	très forte	sehr dicht	muy densa		9
<b>16.</b>	<b>60-73 O-016 (+) I-6.1.14</b>	<b>Shoot: number of consecutive tendrils</b>	<b>Rameau: nombre de vrilles consécutives</b>	<b>Trieb: Anzahl aufeinanderfol- gender Ranken</b>	<b>Sarmiento: número de zarcillos consecutivos</b>		
		less than three	moins de trois	weniger als drei	menos de tres	<i>Vitis vinifera</i>	1
		three or more	trois ou plus	drei oder mehr	tres o más	<i>Vitis labrusca</i>	2
<b>17.</b>	<b>60-73 O-017 I-6.1.15</b>	<b>Shoot: length of tendrils</b>	<b>Rameau: longueur des vrilles</b>	<b>Trieb: Länge der Ranken</b>	<b>Sarmiento: longitud del zarcillos</b>		
		very short	très courtes	sehr kurz	muy corto	Rupestris du Lot	1
		short	courtes	kurz	corto	Aramon noir N	3
		medium	moyennes	mittel	medio	Pinot noir N	5
		long	longues	lang	largo	Chasselas blanc B	7
		very long	très longues	sehr lang	muy largo	Emperor Rg	9

Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio		English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
<b>18.</b> (*) (+)	<b>61-68</b> <b>O-151</b> <b>I-6.2.1</b>	<b>Flower: sexual organs</b>	<b>Fleur: organes sexuels</b>	<b>Blüte: Geschlechtsorgane</b>	<b>Flor: órganos sexuales</b>		
		fully developed stamens and no gynoecium	étamines complètement développées et pas de gynécée	vollentwickelte Staubblätter und kein Stempel	Estambres completamente desarrollados y gineceo ausente	Rupestris du Lot	1
		fully developed stamens and reduced gynoecium	étamines complètement développées et un gynécée réduit	vollentwickelte Staubblätter und reduzierter Stempel	Estambres completamente desarrollados y gineceo reducido	3309 Couderc	2
		fully developed stamens and fully developed gynoecium	étamines complètement développées et un gynécée complètement développé	vollentwickelte Staubblätter und vollentwickelter Stempel	Estambres completamente desarrollados y gineceo completamente desarrollado	Chasselas blanc B	3
		reflexed stamens and fully developed gynoecium	étamines réfléchies et un gynécée complètement développé	zurückgebogene Staubblätter und vollentwickelter Stempel	Estambres reflejos y gineceo completamente desarrollado	Ohanes B	4
<b>19.</b> (*) (+)	<b>75-81</b> <b>O-065</b> <b>I-6.1.21</b>	<b>Adult leaf: size of blade</b>	<b>Feuille adulte: taille du limbe</b>	<b>Ausgewachsenes Blatt: Größe der Spreite</b>	<b>Hoja adulta: tamaño del limbo</b>		
		very small	très petit	sehr klein	muy pequeño	<i>Vitis rupestris</i>	1
		small	petit	klein	pequeño	Gamay N	3
		medium	moyen	mittel	medio	Cabernet Sauvignon N	5
		large	grand	groß	grande	Carignan N	7
		very large	très grand	sehr groß	muy grande	<i>Vitis coignetiae</i>	9
<b>20.</b> (*) (+)	<b>75-81</b> <b>O-067</b> <b>I-6.1.22</b>	<b>Mature leaf: shape of blade</b>	<b>Feuille adulte: forme du limbe</b>	<b>Ausgewachsenes Blatt: Form der Spreite</b>	<b>Hoja adulta: forma del limbo</b>		
		cordate	cordiforme	herzförmig	cordiforme	<i>Vitis cordifolia</i>	1
		deltoid	deltoïde	deltaförmig	deltoïde	Riparia Gloire de Montpellier	2
		pentagonal	pentagonale	fünfeckig	pentagonal	Chasselas blanc B	3
		orbicular	orbiculaire	kreisförmig	orbicular	Clairette B	4
		reniform	réniforme	nierenförmig	reniforme	Rupestris du Lot	5

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
21. (+)	<b>75-81</b> <b>O-074</b> <b>I-6.1.25</b>	<b>Mature leaf: profile in cross section</b>	<b>Feuille adulte: profil en section transversale</b>	<b>Ausgewachsenes Blatt: Profil im Querschnitt</b>	<b>Hoja adulta: perfil en sección transversal</b>		
		flat	plan	eben	plano	Cabernet Sauvignon N	1
		V-shaped	en V	V-förmig	en forma de V	Rupestris du Lot	2
		involute	involuté	Rand nach oben gebogen	con bordes hacia el haz	Furmint B	3
		revolute	révoluté	Rand nach unten gebogen	con bordes hacia el envés	Alicante Bouschet N	4
		undulate	ondulé	gewellt	alabeado	Grenache noir N	5
22.	<b>75-81</b> <b>O-075</b> <b>I-6.1.26</b>	<b>Mature leaf: blistering of upper side of blade</b>	<b>Feuille adulte: cloûre de la face supérieure du limbe</b>	<b>Ausgewachsenes Blatt: Blasigkeit der Oberfläche der Spreite</b>	<b>Hoja adulta: abullonado del haz</b>		
		absent or very weak	nulle ou très faible	fehlend oder sehr gering	nula o muy débil	Rupestris du Lot	1
		weak	faible	gering	débil	Chasselas blanc B	3
		medium	moyenne	mittel	media	Semillon B	5
		strong	forte	stark	fuerte	Ugni blanc B	7
		very strong	très forte	sehr stark	muy fuerte	<i>Vitis amurensis</i>	9
23. (* (+)	<b>75-81</b> <b>O-068</b> <b>I-6.1.23</b>	<b>Mature leaf: number of lobes</b>	<b>Feuille adulte: nombre de lobes</b>	<b>Ausgewachsenes Blatt: Anzahl Lappen</b>	<b>Hoja adulta: número de lóbulos</b>		
		none	feuille entière	keine	hoja entera	Chardonnay B	1
		three	trois	drei	tres	Chenin blanc B	2
		five	cinq	fünf	cinco	Chasselas blanc B	3
		seven	sept	sieben	siete	Müller Thurgau B	4
		more than seven	plus de sept	mehr als sieben	más de siete	Hebron B	5



	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
24. (+)	75-81 O- I-6.1.34	<b>Mature leaf: depth of upper lateral sinuses</b>	<b>Feuille adulte: profondeur des sinus latéraux supérieurs</b>	<b>Ausgewachsenes Blatt: Tiefe der oberen Seiten- buchten</b>	<b>Hoja adulta: pro- fundidad de los senos laterales superiores</b>		
		very shallow	très superficiels	sehr flach	muy superficiales	Melon B	1
		shallow	superficiels	flach	superficiales	Gamay N	3
		medium	moyens	mittel	medios	Merlot N	5
		deep	profonds	tief	profundos	Chasan B	7
		very deep	très profonds	sehr tief	muy profundos	Chasselas Cioutat B	9
25. (+)	75-81 O-082 I-6.1.33	<b>Mature leaf: arrangement of lobes of upper lateral sinuses</b>	<b>Feuille adulte: arrangement des lobes des sinus latéraux supé- rieurs</b>	<b>Ausgewachsenes Blatt: Anordnung der Lappen der oberen Seiten- buchten</b>	<b>Hoja adulta: disposición de los lóbulos de los laterales superiores</b>		
		open	ouverts	offen	abiertos	Folle Blanche B	1
		closed	fermés	geschlossen	cerrados	Chasselas blanc B	2
		slightly overlapped	légèrement chevauchants	leicht überlappt	ligeramente superpuestos	Cabernet Sauvignon N	3
		strongly overlapped	très chevauchants	weit überlappt	muy superpuestos	Clairette B	4

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>26.</b> (*) (+)	<b>75-81</b> <b>O-079</b> <b>I-6.1.30</b>	<b>Mature leaf: arrangement of lobes of petiole sinus</b>	<b>Feuille adulte: arrangement des lobes du sinus pétiole</b>	<b>Ausgewachsenes Blatt: Anordnung der Lappen der Stielbucht</b>	<b>Hoja adulta: disposición de los lóbulos del seno pe- ciolar</b>		
		very wide open	très largement ou- vert	sehr weit offen	muy ampliamente abierto	Rupestris du Lot	1
		wide open	très ouvert	weit offen	muy abierto	Riparia Gloire de Montpellier	2
		half open	demi-ouvert	halb offen	medio abierto	Aramon noir N	3
		slightly open	peu ouvert	leicht offen	poco abierto	Sauvignon B	4
		closed	fermé	geschlossen	cerrado	Chasselas blanc B	5
		slightly overlapped	légèrement chevauchant	leicht überlappt	ligeramente superpuesto	Aubun N	6
		half overlapped	demi-chevauchant	halb überlappt	medio superpuesto	Riesling B	7
		strongly overlapped	très chevauchant	weit überlappt	fuertemente superpuesto	Clairette B	8
		very strongly overlapped	très fortement chevauchant	sehr weit überlappt	muy fuertemente superpuesto	Domina N	9
<b>27.</b> (+)	<b>75-81</b> <b>O-081.2</b> <b>I-6.1.32</b>	<b>Mature leaf: petiole sinus limited by veins</b>	<b>Feuille adulte: sinus pétiole limité par la nervure</b>	<b>Ausgewachsenes Blatt: Stielbucht durch Nerven begrenzt</b>	<b>Hoja adulta: seno peciolar limitado por nervios</b>		
		absent	absent	fehlend	ausente	Chasselas blanc B	1
		present	présent	vorhanden	presente	Chardonnay B	9
<b>28.</b> (*) (+)	<b>75-81</b> <b>O-077</b> <b>I-6.1.28</b>	<b>Mature leaf: length of teeth</b>	<b>Feuille adulte: longueur des dents</b>	<b>Ausgewachsenes Blatt: Länge der Zähne</b>	<b>Hoja adulta: longi- tud de los dientes</b>		
		short	courtes	kurz	cortos	Pinot noir N	3
		medium	moyennes	mittel	medios	Merlot N	5
		long	longues	lang	largos	Carignan N	7

Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>29.</b> (*) (+)	<b>75-81</b> <b>O-078</b> <b>I-6.1.29</b>	<b>Mature leaf: ratio length/width of teeth</b>	<b>Feuille adulte: rapport longueur/largeur des dents</b>	<b>Ausgewachsenes Blatt: Verhältnis Länge/Breite der Zähne</b>	<b>Hoja adulta: relación longitud/anchura de los dientes</b>		
		very small	très petit	sehr klein	muy pequeña	<i>Vitis aestivalis</i>	1
		small	petit	klein	pequeña	Sylvaner B	3
		medium	moyen	mittel	media	Chasselas blanc B	5
		large	grand	groß	grande	Muscat d'Alexandrie B	7
		very large	très grand	sehr groß	muy grande	<i>Vitis riparia</i>	9
<b>30.</b> (*) (+)	<b>75-81</b> <b>O-076</b> <b>I-6.1.27</b>	<b>Mature leaf: shape of teeth</b>	<b>Feuille adulte: forme des dents</b>	<b>Ausgewachsenes Blatt: Form der Zähne</b>	<b>Hoja adulta: forma de los dientes</b>		
		both sides concave	à côtés concaves	beiderseits konkav	ambos lados cóncavos	Aestivalis Jäger	1
		both sides straight	à côtés rectilignes	beiderseits geradlinig	ambos lados rectilíneos	Muscat blanc B	2
		both sides convex	à côtés convexes	beiderseits konvex	ambos lados convexos	Chenin blanc B	3
		one side concave, one side convex	un côté concave, un côté convexe	eine Seite konkav, eine Seite konvex	un lado cóncavo, un lado convexo	Aspiran N	4
		mixture of both sides straight and both sides convex	mélange de deux côtés rectilignes et deux côtés convexes	Mischung aus beiderseits geradlinig und beiderseits konvex	mezcla de ambos lados rectilíneos y ambos lados convexos	Cabernet franc N	5

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota				
31. (*)	75-81 O-070 I-6.1.24	<b>Mature leaf: anthocyanin coloration of main veins on <u>upper</u> side of blade</b>	<b>Feuille adulte: pigmentation anthocyanique des nervures principales de la face <u>supérieure</u> du limbe</b>	<b>Ausgewachsenes Blatt: Anthocyanfärbung <u>der</u> Hauptnerven auf der <u>Oberseite</u> der Spreite</b>	<b>Hoja adulta: pigmentación antocianica <u>de</u> los nervios principales del <u>haz</u></b>						
						absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Grenache noir N	1
						weak	faible	gering	débil	Muscat d'Alexandrie B	3
						medium	moyenne	mittel	media	Primitivo N	5
						strong	forte	stark	fuerte	Chenin blanc B	7
	very strong	très forte	sehr stark	muy fuerte	Flame Seedless Rg	9					
32. (*)	75-81 O-084 I-6.1.35	<b>Mature leaf: density of <u>prostrate</u> hairs between main veins on <u>lower</u> side of blade</b>	<b>Feuille adulte: densité des poils couchés entre les nervures principales de la face <u>inférieure</u> du limbe</b>	<b>Ausgewachsenes Blatt: Dichte der Wollbehaarung <u>zwischen</u> den Hauptnerven auf der <u>Unterseite</u> der Spreite</b>	<b>Hoja adulta: densidad de los pelos <u>postrados</u> entre los nervios principales del <u>envés</u></b>						
						absent or very sparse	nulle ou très faible	fehlend oder sehr locker	nula o muy laxa	Rupestris du Lot	1
						sparse	faible	locker	laxa	Müller Thurgau B	3
						medium	moyenne	mittel	media	Mourvèdre N	5
						dense	forte	dicht	densa	Clairette B	7
	very dense	très forte	sehr dicht	muy densa	<i>Vitis labrusca</i>	9					

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
33. (*)	<b>75-81</b> <b>O-087</b> <b>I-6.1.38</b>	<b>Mature leaf: density of <u>erect</u> hairs on main veins on <u>lower</u> side of blade</b>	<b>Feuille adulte: densité des poils <u>dressés des nervures principales</u> de la face <u>inférieure</u> du limbe</b>	<b>Ausgewachsenes Blatt: Dichte der <u>Borstenbehaarung der Hauptnerven</u> auf der <u>Unterseite</u> der Spreite</b>	<b>Hoja adulta: densidad de pelos <u>erguidos sobre los nervios principales</u> del <u>envés</u></b>		
		absent or very sparse	nulle ou très faible	fehlend oder sehr locker	nula o muy laxa	Rupestris du Lot	1
		sparse	faible	locker	laxa	Perle de Csaba B	3
		medium	moyenne	mittel	media	Muscat Ottonel B	5
		dense	forte	dicht	densa	Kober 125 AA	7
		very dense	très forte	sehr dicht	muy densa	Aris B	9
34.	<b>75-81</b> <b>O-093</b> <b>I-6.1.40</b>	<b>Mature leaf: length of petiole compared to middle vein</b>	<b>Feuille adulte: longueur du pétiole par rapport à la nervure médiane</b>	<b>Ausgewachsenes Blatt: Länge des Stieles im Vergleich zum Mittelnerv</b>	<b>Hoja adulta: longitud del peciolo en relación al nervio central</b>		
		much shorter	plus court	viel kürzer	más corto		1
		slightly shorter	légèrement plus court	etwas kürzer	ligeramente más corto	Riparia Gloire de Montpellier	2
		equal	égal	gleich	igual	Grenache noir N	3
		slightly longer	légèrement plus long	etwas länger	ligeramente más largo	Cardinal N	4
		much longer	plus long	viel länger	más largo		5
35. (*) (+)	<b>81</b> <b>O-303</b> <b>I-7.1.4</b>	<b><u>Only varieties for fruit production:</u> Time of beginning of berry ripening (veraison)</b>	<b><u>Seulement variétés destinées à la production de fruits:</u> Époque de début de véraison</b>	<b><u>Nur Sorten zur Fruchterzeugung:</u> Zeitpunkt des Beginns der Beerenreife</b>	<b><u>Solo variedades para la producción de fruta:</u> Época del comienzo del envero</b>		
		very early	très précoce	sehr früh	muy temprana	Perle de Csaba B	1
		early	précoce	früh	temprana	Chasselas blanc B	3
		medium	moyenne	mittel	media	Riesling B	5
		late	tardive	spät	tardía	Carignan N	7
		very late	très tardive	sehr spät	muy tardía	Olivette noire N	9

Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>36.</b> (*)	<b>89</b> <b>O-</b> <b>I-6.2.2</b>	<b>Bunch: size</b> (peduncle ex- cluded)	<b>Grappe: taille</b> (pédoncule exclu)	<b>Traube: Größe</b> (ohne Stiel)	<b>Racimo: tamaño</b> (pedúnculo excluido)		
		very small	très petite	sehr klein	muy pequeño	Kober 5 BB	1
		small	petite	klein	pequeño	Pinot noir N	3
		medium	moyenne	mittel	medio	Chasselas blanc B	5
		large	grosse	groß	grande	Müller Thurgau B	7
		very large	très grosse	sehr groß	muy grande	Nehelescol B	9
<b>37.</b> (*) (+)	<b>89</b> <b>O-204</b> <b>I-6.2.3</b>	<b>Bunch: density</b>	<b>Grappe: compa- cité</b>	<b>Traube: Dichte</b>	<b>Racimo: compa- cidad</b>		
		very loose	très lâche	sehr locker	muy suelto	<i>Vitis amurensis</i>	1
		loose	lâche	locker	suelto	Cardinal Rg	3
		medium	moyenne	mittel	medio	Chasselas blanc B	5
		dense	compacte	dicht	compacto	Chardonnay B	7
		very dense	très compacte	sehr dicht	muy compacto	Meunier N	9
<b>38.</b> (*)	<b>89</b> <b>O-206</b> <b>I-6.2.4</b>	<b>Bunch: length of peduncle</b>	<b>Grappe: longueur du pédoncule</b>	<b>Traube: Länge des Stieles</b>	<b>Racimo: longitud del pedúnculo</b>		
		very short	très court	sehr kurz	muy corto	Sylvaner B	1
		short	court	kurz	corto	Gewürztraminer Rs	3
		medium	moyen	mittel	medio	Marsanne B	5
		long	long	lang	largo	Alphonse Lavallée N	7
		very long	très long	sehr lang	muy largo	9	

	Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>39.</b>	<b>89</b> - <b>I-6.2.5</b>	<b>Berry: size</b>	<b>Baie: grosseur</b>	<b>Beere: Größe</b>	<b>Baya: tamaño</b>		
(*)		very small	très petite	sehr klein	muy pequeña	Corinthe noir N	1
		small	petite	klein	pequeña	Riesling B	3
		medium	moyenne	mittel	media	Blauer Portugieser N	5
		large	grosse	groß	grande	Muscat d'Alexandrie B	7
		very large	très grosse	sehr groß	muy grande	Alphonse Lavallée N	9
<b>40.</b>	<b>89</b> <b>O-223</b> <b>I-6.2.6</b>	<b>Berry: shape in profile</b>	<b>Baie: forme en profil</b>	<b>Beere: Form in der Seitenansicht</b>	<b>Baya: forma de perfil</b>		
(*)		oblong	rectangulaire	rechteckig	oblonga	Kahlili belyi B	1
(+)		elliptic	elliptique	elliptisch	elíptica	Olivette noire N	2
		broad elliptic	elliptique large	breit elliptisch	elíptica ancha	Müller Thurgau B	3
		circular	circulaire	kreisförmig	circular	Chasselas blanc B	4
		oblate	aplatie	abgeflacht kreisförmig	aplanada	Nobling B	5
		ovate	ovoïde	eiförmig	ovoide	Bicane B	6
		obtuse ovate	troncovoïde	abgestumpft eiförmig	troncovoide	Ahmeur bou Ahmeur Rs	7
		obovate	obovoïde	verkehrt eiförmig	acuminada	Muscat d'Alexandrie B	8
		corniform	corniforme	hornförmig	en forma de cuerno	Santa Paula B	9

Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
41. (*)	89 O-225 I-6.2.8	<b>Berry: color of skin (without bloom)</b>	<b>Baie: couleur de l'épiderme (sans pruine)</b>	<b>Beere: Farbe der Haut (ohne Bereifung)</b>	<b>Baya: color de la epidermis (sin pruina)</b>		
		yellow-green	vert jaune	gelbgrün	verde-amarilla	Chasselas blanc B	1
		rose	rose	rosa	rosa	Chasselas rose Rs	2
		red	rouge	rot	roja	Molinera gorda Rg	3
		grey-red	rouge gris	graurot	roja-gris	Pinot gris G	4
		dark red violet	rouge foncé violet	dunkelrotviolett	roja-violeta oscura	Cardinal Rg	5
	blue black	noir bleu	blauschwarz	negra-azul	Pinot noir N	6	
42.	89 O-240 I-6.2.13	<b>Berry: ease of detachment from pedicel</b>	<b>Baie: facilité de séparation du pédicelle</b>	<b>Beere: Trennbarkeit vom Stiel</b>	<b>Baya: facilidad de separación del pedicelo</b>		
		difficult	difficile	schwierig	difícil	Carignan N	1
		relatively easy	assez facile	relatif leicht	relativamente fácil	Sylvaner B	2
	very easy	très facile	sehr leicht	muy fácil	Isabella N	3	
43.	89 O-228 I-7.1.6	<b>Berry: thickness of skin</b>	<b>Baie: épaisseur de la peau</b>	<b>Beere: Dicke der Haut</b>	<b>Baya: grosor de la piel</b>		
		thin	mince	dünn	fina	Chasselas blanc B	3
		medium	moyenne	mittel	media	Carignan N	5
	thick	épaisse	dick	gruesa	Servant B	7	

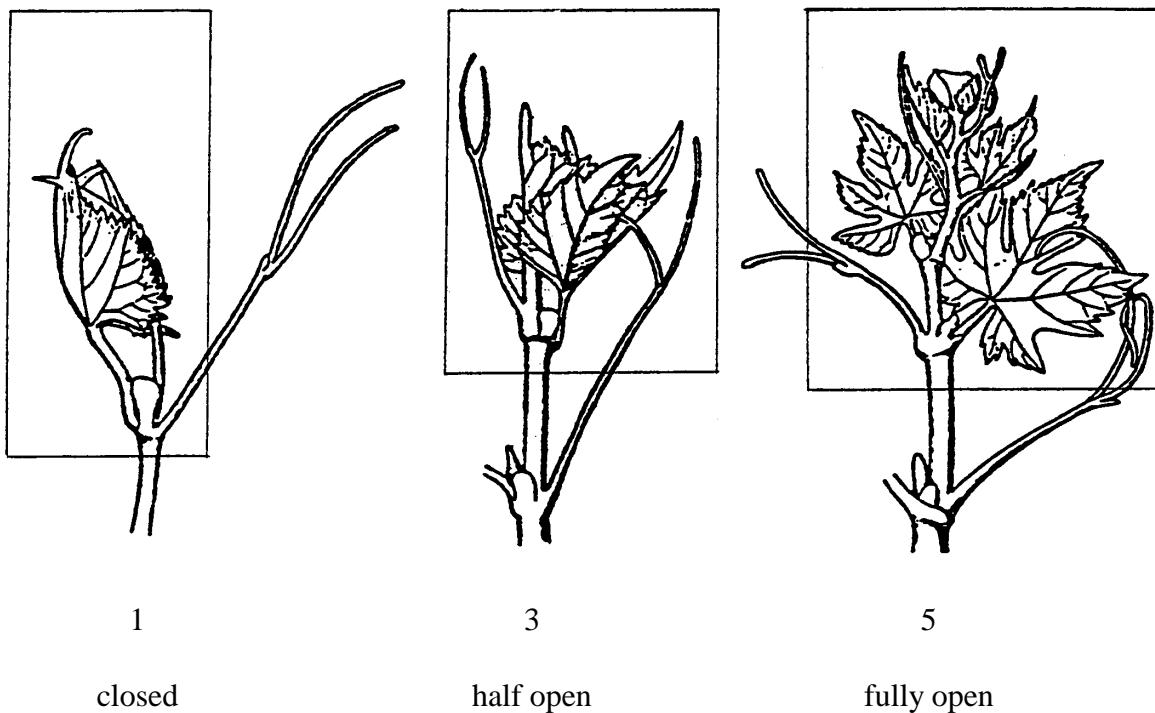


Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
44. (*)	89 O-231 I-6.2.9	<b>Berry: antho- cyanin coloration of flesh</b>	<b>Baie: pigmen- tation antho- cianique de la pulpe</b>	<b>Beere: Antho- cyanfärbung des Fruchtfleischs</b>	<b>Baya: pigmentación antociánica de la pulpa</b>		
		absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Pinot noir N	1
		weak	faible	gering	débil	Gamay de Bouze N	3
		medium	moyenne	mittel	media	Gamay de Chaudenay N	5
		strong	forte	stark	fuerte	Alicante Bouschet N	7
	very strong	très forte	sehr stark	muy fuerte		9	
45.	89 O-235 I-6.2.11	<b>Berry: firmness of flesh</b>	<b>Baie: fermeté de la pulpe</b>	<b>Beere: Festigkeit des Fruchtfleischs</b>	<b>Baya: consistencia de la pulpa</b>		
		soft	molle	weich	blanda	Pinot gris G	1
		slightly firm	légèrement ferme	mäßig fest	ligeramente dura	Sauvignon B	2
	very firm	très ferme	sehr fest	muy dura	Olivette noire B	3	
46.	89 O-232 I-6.2.10	<b>Berry: juiciness of flesh</b>	<b>Baie: succulence de la pulpe</b>	<b>Beere: Saftigkeit des Fruchtfleischs</b>	<b>Baya: succulencia de la pulpa</b>		
		scarcely juicy	à peine juteuse	kaum saftig	apenas jugosa	Isabella N	1
		slightly juicy	légèrement juteuse	mäßig saftig	ligeramente jugosa		2
	very juicy	très juteuse	sehr saftig	muy jugosa	Aramon noir N	3	

Codes/ <sup>1)</sup> Códigos Stage/Stade Stadium/Estadio	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>47. 89</b> <b>(*) O-236</b> <b>I-6.2.12</b>	<b>Berry: particular flavor</b>	<b>Baie: particularité de la saveur</b>	<b>Beere: besonderer Geschmack</b>	<b>Baya: sabores particulares</b>		
	none	aucune	keiner	ninguno	Auxerrois B	1
	muscat	goût muscaté	Muskatgeschmack	sabor a moscatel	Muscat d'Alexandrie B	2
	foxy	goût foxé	Foxgeschmack	sabor avulpinado	Isabella N	3
	herbaceous	goût herbacé	krautiger Geschmack	sabor herbáceo	Cabernet Sauvignon N	4
	other than muscat, foxy or herbaceous	autre goût que muscaté, foxé ou herbacé	anderer Geschmack als Muskat-, Fox- oder krautiger Geschmack	otro sabor aparte de moscatel, avulpinado o herbáceo	Riesling B	5
<b>48. 89</b> <b>(*) O-241</b> <b>I-6.2.7</b>	<b>Berry: formation of seeds</b>	<b>Baie: formation de pépins</b>	<b>Beere: Ausbildung von Samen</b>	<b>Baya: formación de pepitas</b>		
	absent	absente	nicht vorhanden	ausente	Corinthe noir N	1
	rudimentary	rudimentaire	rudimentär	rudimentaria	Sultanina B	2
	complete	complète	vollständig	bien formada	Riesling B	3
<b>49. 91-00</b> <b>O-103</b> <b>I-6.1.42</b>	<b>Woody shoot: main color (without bloom)</b>	<b>Sarment: couleur principale (sans pruine)</b>	<b>Rebholz: Hauptfarbe (ohne Bereifung)</b>	<b>Sarmiento leñoso: color principal (sin pruina)</b>		
	yellow	jaune	gelb	amarillo	Grenache noir N	1
	yellowish brown	brun jaunâtre	gelblichbraun	marrón amarillento	Müller Thurgau B	2
	dark brown	brun foncé	dunkelbraun	marrón oscuro	Chasselas blanc B	3
	reddish brown	brun rougeâtre	rötlichbraun	marrón rojizo	3309 Couderc	4
	violet	violacé	violett	violáceo	Aestivalis Jäger	5
<b>50. 91-00</b> <b>O-102</b> <b>(+) I-6.1.41</b>	<b>Woody shoot: relief of surface</b>	<b>Sarment: relief de la surface</b>	<b>Rebholz: Gestalt der Oberfläche</b>	<b>Sarmiento leñoso: relieve de la superficie</b>		
	smooth	unie	glatt	lisa	Riparia Gloire de Montpellier	1
	ribbed	côtelée	gerippt	asurcada	<i>Vitis berlandieri</i>	2
	striate	striée	gerieft	estriada	Chasselas blanc B	3
	edged	anguleuse	kantig	angulosa	<i>Vitis rubra</i>	4

VIII. Explanations on the Table of Characteristics

Ad. 3 to 6: Young shoot: tip (part in squares to be observed)



Ad. 4, 5 and 6: Young shoot: density of prostrate hairs on tip (4), anthocyanin coloration of prostrate hairs on tip (5) and (Only varieties not for fruit production) density of erect hairs on tip (6)

Wide open or fully open tips (characteristic 3) to be observed with inclusion of first 2 distal unfolded leaves. Leaves of closed, slightly open or half open tips to be unfolded to enable observations on corresponding part of tip.

Ad. 7: Young leaf: color of upper side of blade

Observation on first 2 distal unfolded leaves in case of closed, slightly open or half open tips (characteristic 3). Observation on first 4 distal unfolded leaves in case of wide open or fully open tips.

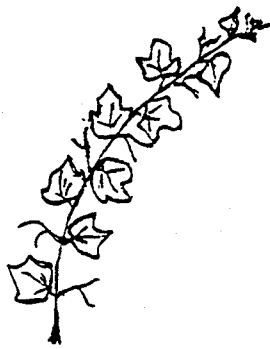
Ad. 8 and 9: Young leaf: density of prostrate hairs (8) and erect hairs (9) between main veins on lower side of blade

Observation on second distal unfolded leaf in case of closed, slightly open or half open tips (characteristic 3). Observation on fourth distal unfolded leaf in case of wide open or fully open tips.

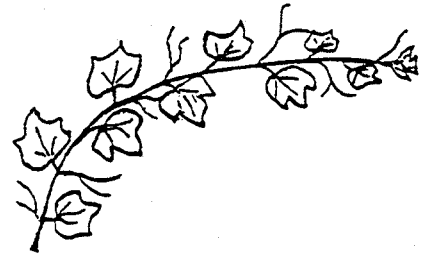
Ad. 10: Shoot: attitude (before tying)



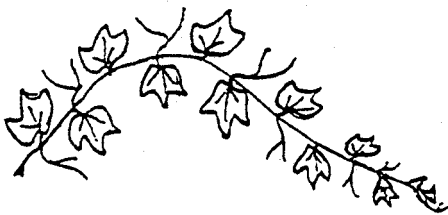
1  
erect



3  
semi-erect



5  
horizontal



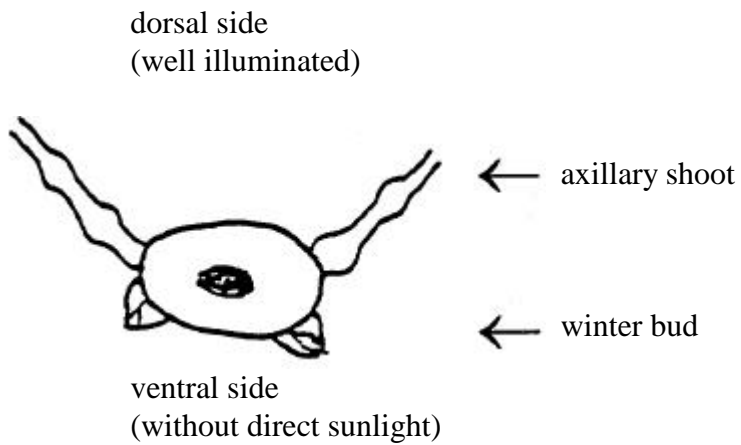
7  
semi-drooping



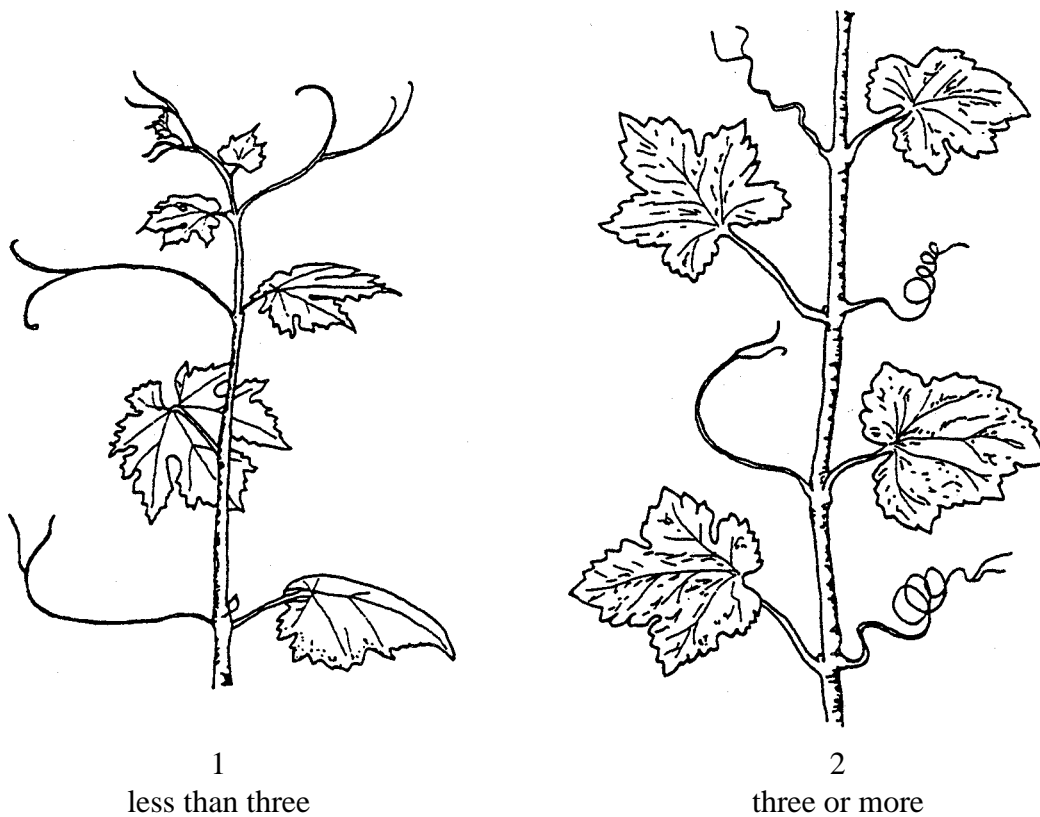
9  
drooping

Ad. 11 to 14: Shoot: dorsal/ventral side

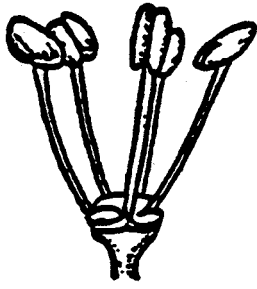
Cross section of shoot



Ad. 16: Shoot: number of consecutive tendrils

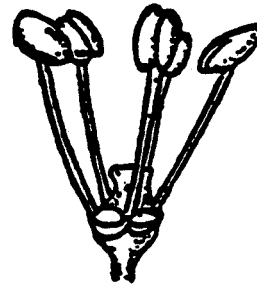


Ad. 18: Flower: sexual organs



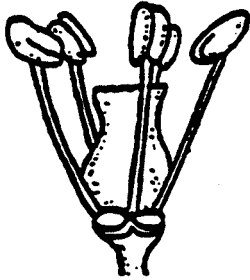
1

fully developed stamens  
and no gynoecium



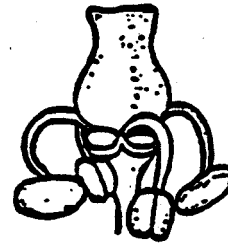
2

fully developed stamens  
and reduced gynoecium



3

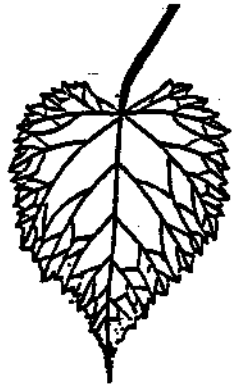
fully developed stamens  
and fully developed gynoecium



4

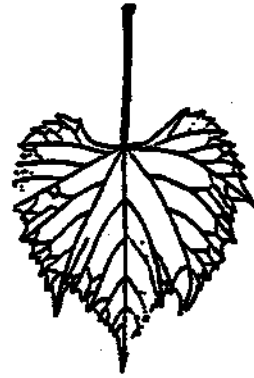
reflexed stamens  
and fully developed gynoecium

Ad. 20: Mature leaf: shape of blade



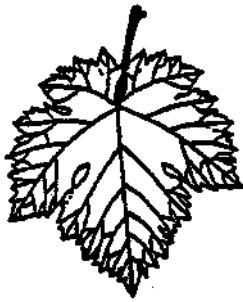
1

cordate



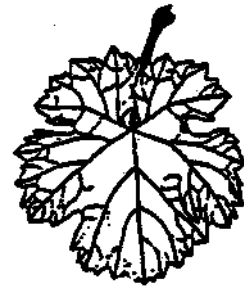
2

deltoid



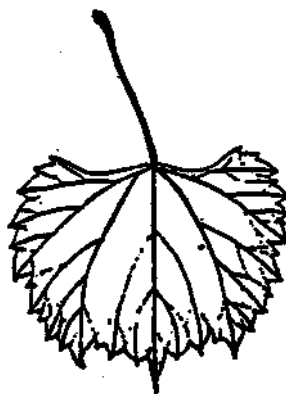
3

pentagonal



4

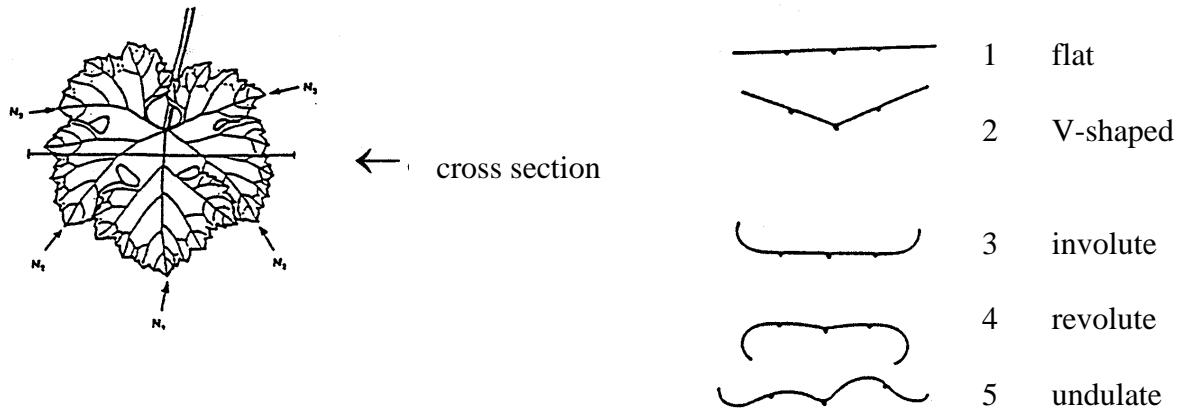
orbicular



5

reniform

Ad. 21: Mature leaf: profile in cross section



Ad. 23: Mature leaf: number of lobes

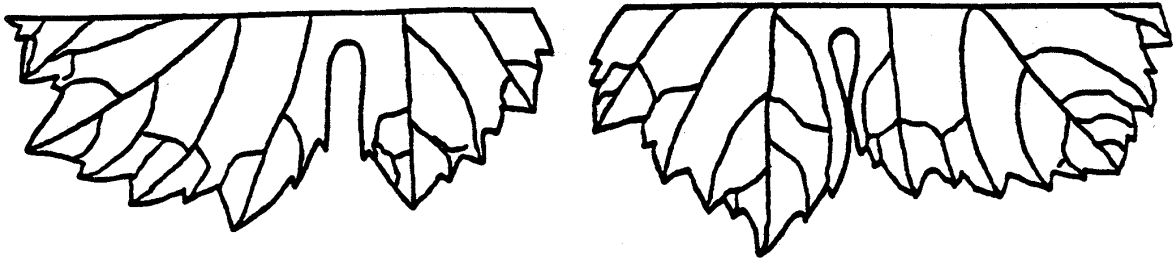
A lobe is that part of the leaf which lies between two leaf sinuses. A leaf sinus results from a clear interruption of teeth on the leaf margin.



Ad. 24 and 25: Mature leaf: upper lateral sinuses

A sinus results from a clear interruption of teeth on the leaf margin. The upper lateral sinuses are situated between the middle vein and the next lateral main vein.

Ad. 25: Mature leaf: arrangement of lobes of upper lateral sinuses

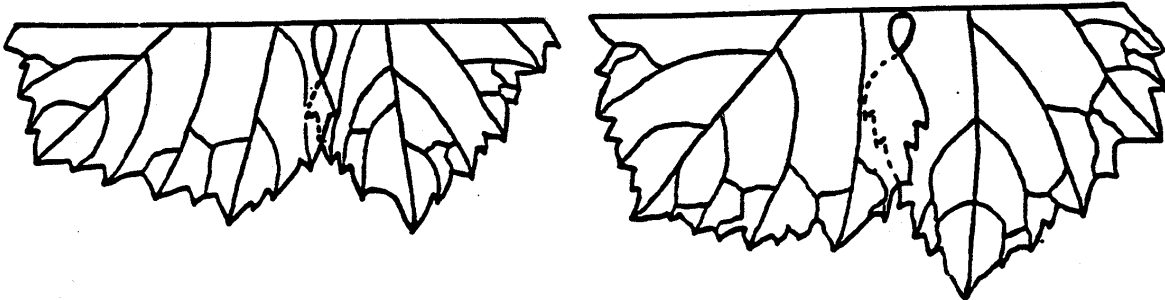


1

open

2

closed



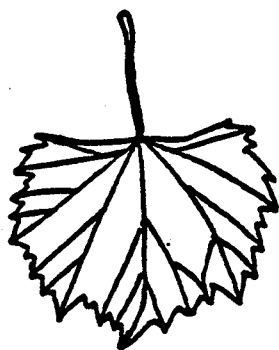
3

slightly overlapped

4

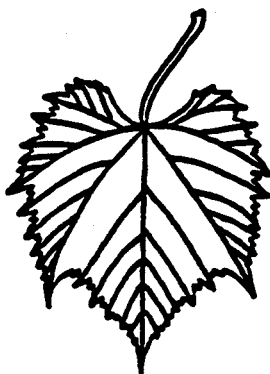
strongly overlapped

Ad. 26: Mature leaf: arrangement of lobes of petiole sinus



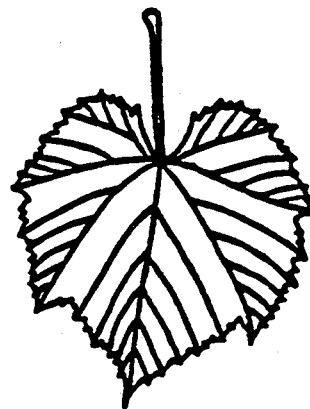
1

very wide open



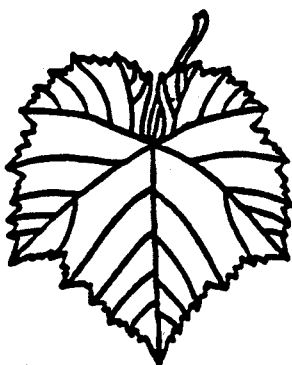
2

wide open



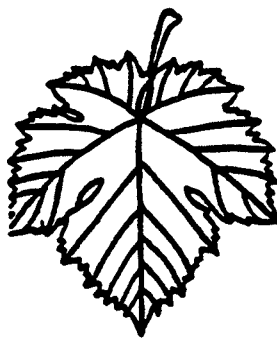
3

half open



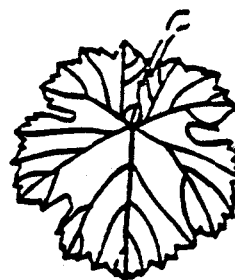
4

slightly open



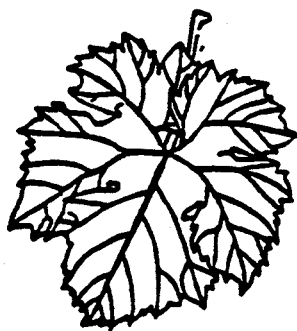
5

closed



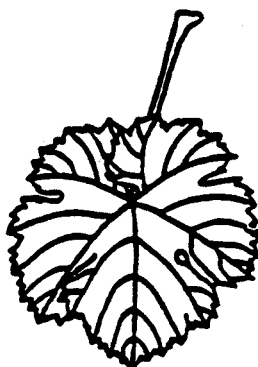
6

slightly overlapped



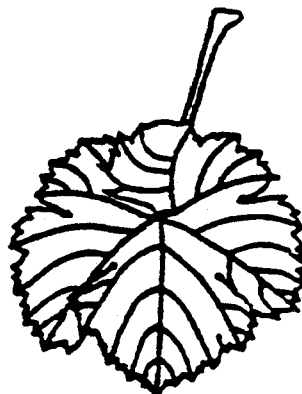
7

half overlapped



8

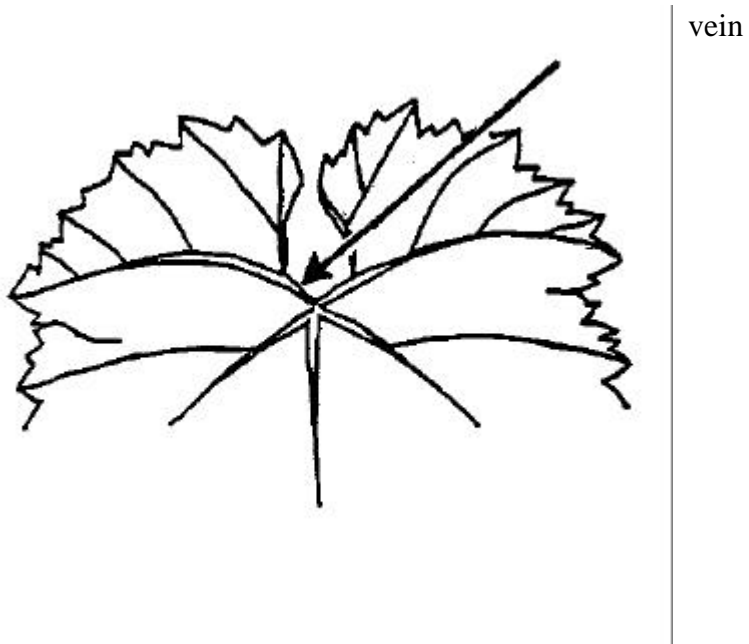
strongly overlapped



9

very strongly overlapped

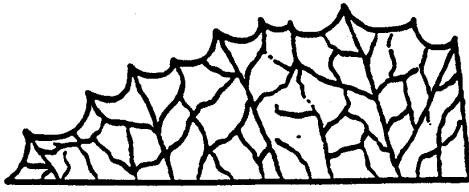
Ad. 27: Mature leaf: petiole sinus limited by veins



Ad. 28 - 30: Mature leaf: teeth

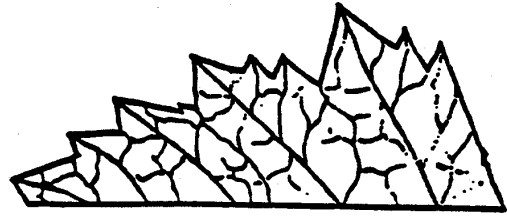
All observations should be made between lateral main veins on the teeth of secondary veins.

Ad. 30: Mature leaf: shape of teeth



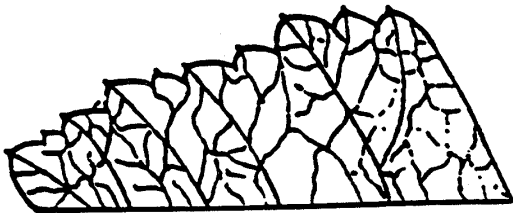
1

both sides concave



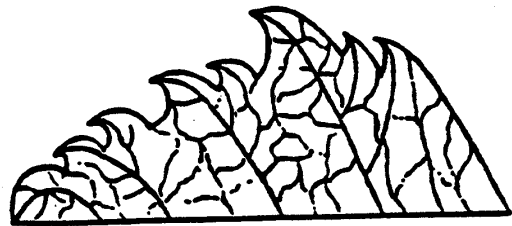
2

both sides straight



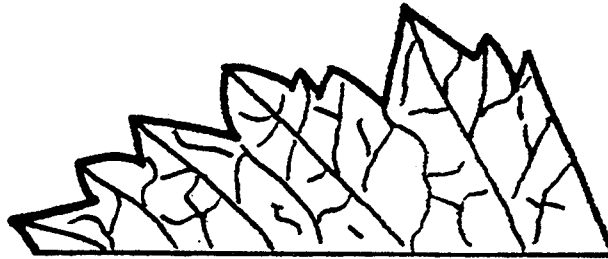
3

both sides convex



4

one side concave, one side convex



5

mixture of both sides straight and  
both sides convex

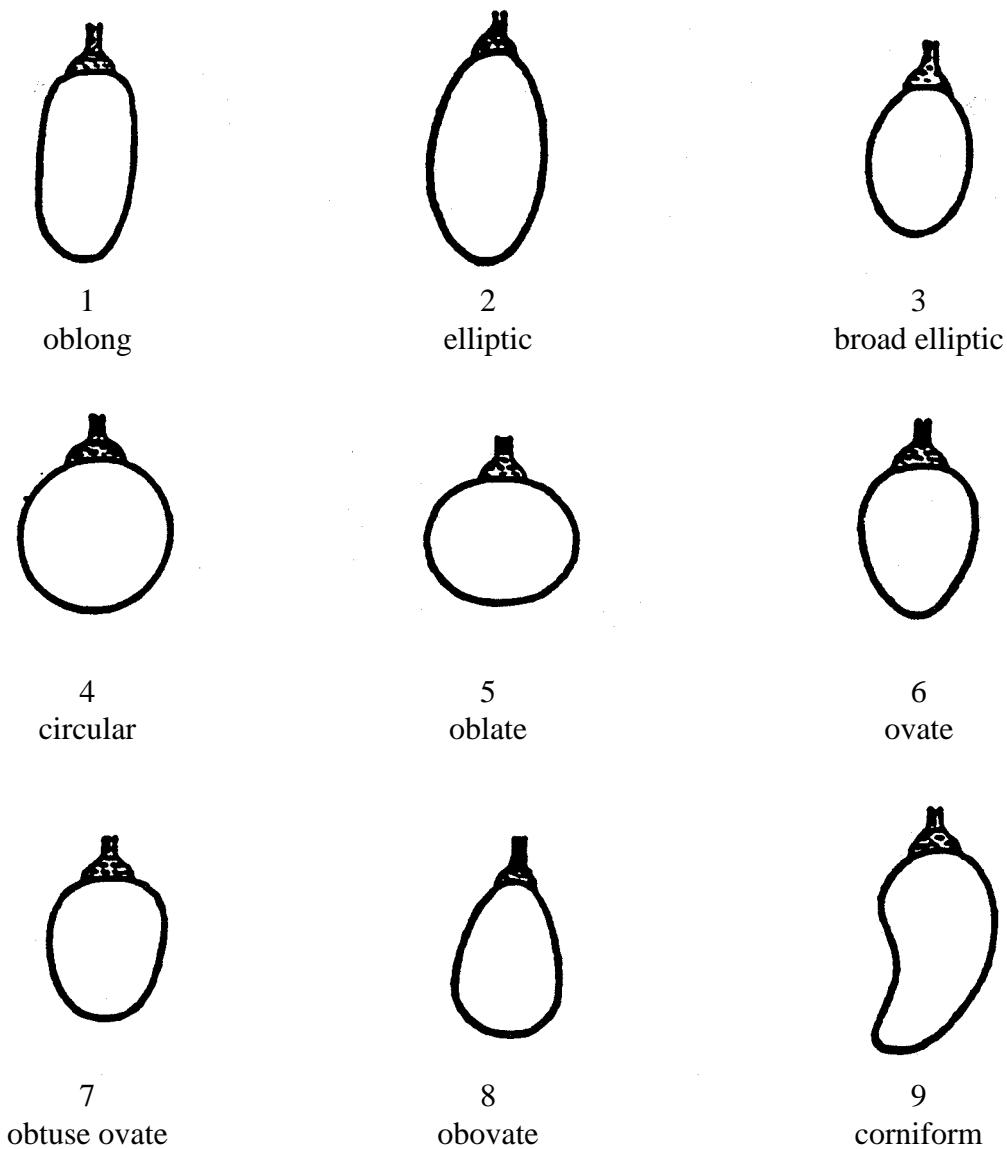
Ad. 35: Only varieties for fruit production: Time of berry ripening (veraison)

About 50% of berries start getting soft.

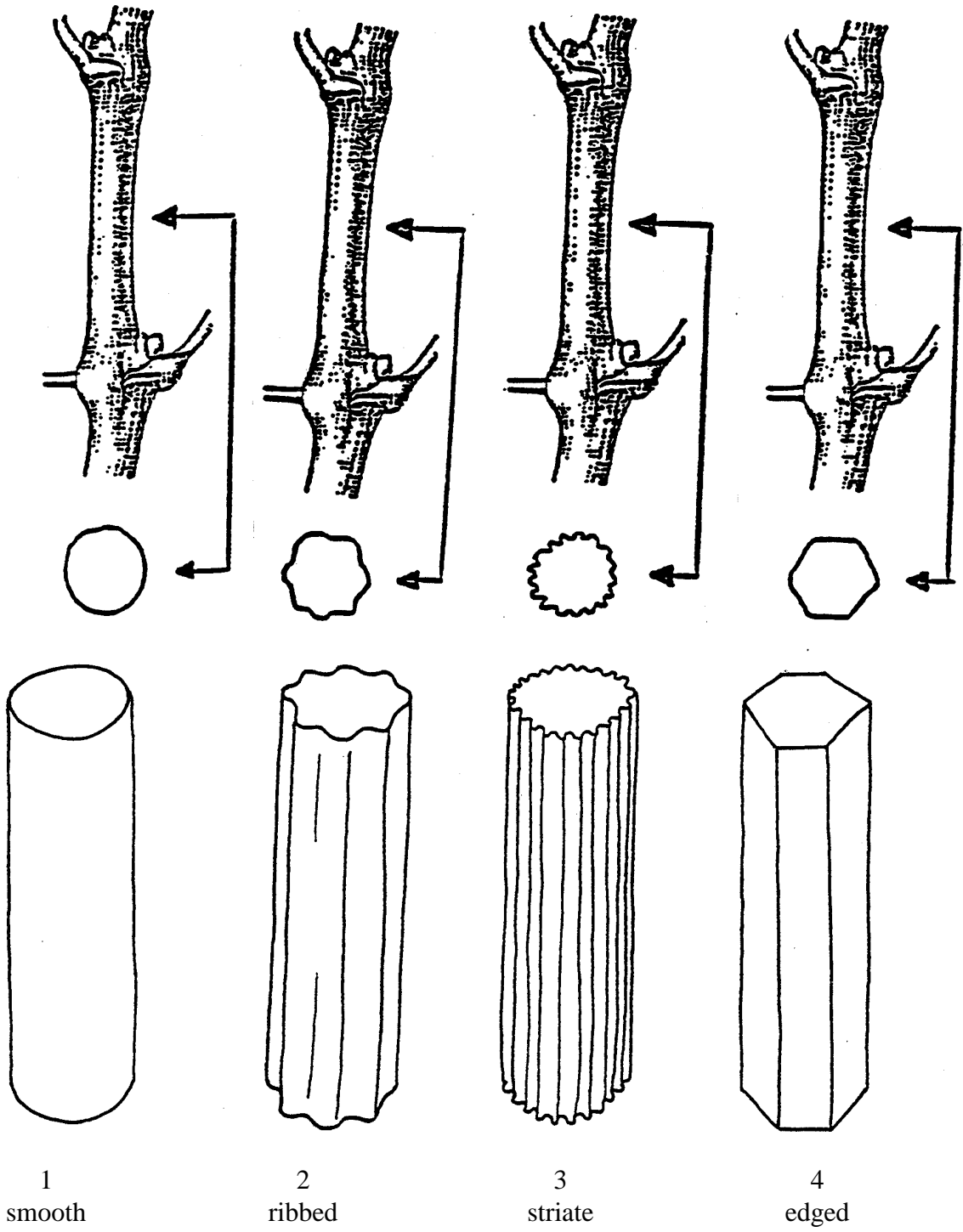
Ad. 37: Bunch: density

- 1 = berries in grouped formation, many visible pedicels
- 3 = single berries, some pedicels visible
- 5 = densely distributed berries, pedicels not visible, berries movable
- 7 = berries not readily movable
- 9 = berries pressed out of shape.

Ad. 40: Berry: shape in profile



Ad. 50: Woody shoot: relief of surface



Synonyms for Certain Example Varieties Used

Example Varieties	Synonyms
Blauer Portugieser N	Portugais bleu
Chasselas blanc B	Weisser Gutedel
Chasselas rose Rs	Roter Gutedel
Corinthe noir N	Black Corinth, Corinto nero, Korinthiaki
Gewürztraminer Rs	Roter Traminer, Traminer aromatico
Grenache noir N	Garnacha tinta
Meunier N	Müllerrebe, Pinot meunier
Müller Thurgau B	Rivaner
Muscat blanc B	Gelber Muskateller, Moscato bianco, Muscat à petits grains blancs
Muscat d'Alexandrie B	Hanepoot, Zibibbo
Palomino fino B	Listan
Perle de Csaba B	Csaba gyöngye
Pinot gris G	Grauburgunder, Pinot grigio, Ruländer
Pinot noir N	Blauer Spätburgunder, Pinot nero
Primitivo N	Zinfandel
Riesling B	Riesling renano, Rheinriesling, Weisser Riesling
Sultanina B	Sultana, Thompson Seedless, Sultanine B
Sylvaner B	Grüner Silvaner
Ugni blanc B	Trebbiano toscano

Encoding and Description of the Phenological Stages of Grapevine According to the Extended BBCH Scale<sup>1</sup>

<b>BBCH-Code</b>	<b>Description</b>
<b>Principal growth stage 0</b>	<b>Sprouting</b>
00	Dormancy: winter buds pointed to rounded, bright or dark brown according to cultivar, bud scales more or less closed according to cultivar
01	Beginning of bud swelling: buds begin to expand inside the bud scales
03	End of bud swelling: buds swollen, but not green
05	“Wool stage”: brown wool clearly visible
07	Beginning of bud burst: green shoot tips just visible
09	Bud burst: green shoot tips clearly visible
<b>Principal growth stage 1</b>	<b>Leaf development</b>
11	First leaf unfolded and spread away from shoot
12	Two leaves unfolded
13	Three leaves unfolded
14	Four leaves unfolded
15	Five leaves unfolded
16	Six leaves unfolded
19	Nine or more leaves unfolded
<b>Principal growth stage 5</b>	<b>Inflorescence emergence</b>
53	Inflorescences clearly visible
55	Inflorescences swelling, flowers closely pressed together
57	Inflorescences fully developed, flowers separating
<b>Principal growth stage 6</b>	<b>Flowering</b>
60	First flowerhoods detached from the receptacle
61	Beginning of flowering: 10% of flowerhoods fallen
63	Early flowering: 30% of flowerhoods fallen
65	Full flowering: 50% of flowerhoods fallen
68	80% of flowerhood fallen
69	End of flowering
<b>Principal growth stage 7</b>	<b>Development of fruits</b>
71	Fruit set: young fruits begin to swell, remains of flowers lost
73	Berries goat-sized, bunches begin to hang
75	Berries pea-sized, bunches hang
77	Beginning of berry touch
79	Berry touch completed
<b>Principal growth stage 8</b>	<b>Ripening of berries</b>
81	Beginning of ripening: berries begin to brighten in color
83	Berries brightening in color
85	Softening of berries
89	Berries ripe for harvest
<b>Principal growth stage 9</b>	<b>Senescence</b>
91	After harvest: end of wood maturation
92	Beginning of leaf discoloration
93	Beginning of leaf-fall
95	50% of leaves fallen
97	End of leaf-fall
99	Post-harvest treatments

<sup>1</sup> The code has been jointly developed by *Biologische Bundesanstalt für Land- und Forstwirtschaft (BB)*, *Bundessortenamt (BSA)* and *Industrieverband Agrar (IVA)* in cooperation with *Staatliche Lehr- und Forschungsanstalt für Landwirtschaft, Wein und Gartenbau (SLFA)*, Section Plant Pathology, Neustadt/Weinstraße. Published in Lorenz et al., 1994 (see Literature).



## IX. Literature

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X. Technical Questionnaire

		Reference Number (not to be filled in by the applicant)	
<p><b>TECHNICAL QUESTIONNAIRE</b> to be completed in connection with an application for plant breeders' rights</p>			
1.1	Genus	<i>Vitis</i> L.  GRAPEVINE	
1.2	Species	<i>Vitis vinifera</i> L.	[ ]
		Other	[ ]
		..... (indicate species)	
2.	Applicant (name and address)		
3.	Proposed denomination or breeder's reference		

4. Information on origin, maintenance and reproduction of the variety

4.1 Origin

(a) Seedling of unknown parentage [ ]

(b) Produced by controlled pollination [ ]  
(indicate parent varieties)

– Seed bearing parent (indicate parent)

.....

– Pollen parent (indicate parent)

.....

(c) Produced by open pollination of [ ]  
(indicate seed bearing parent plant)

.....

(d) Mutation or sport from (indicate original parent variety) [ ]  
.....

(e) Discovery (indicate where and when) [ ]  
.....

4.2 Method of reproduction

– cuttings [ ]

– *in vitro* propagation [ ]

– other (please specify) [ ]

.....

4.3 Virus status

Mother plants of the variety:

- (a) The variety is free from all known viruses as follows: [ ]  
(indicate from which viruses)

.....

- (b) The plant material is virus tested [ ]  
(indicate against which viruses)

.....

- (c) The virus status is unknown [ ]

Mother plants of rootstock in case of grafted plants:

- (a) The variety is free from all known viruses as follows: [ ]  
(indicate from which viruses)

.....

- (b) The plant material is virus tested [ ]  
(indicate against which viruses)

.....

- (c) The virus status is unknown [ ]

4.4 Other information

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the state of expression which best corresponds).

Codes/ Stages	Characteristics	Example Varieties	Note
<b>5.1</b> <b>(3)</b> <b>53-69</b> <b>O-001</b> <b>I-6.1.1</b>	<b>Young shoot: openness of tip</b>		
	closed	<i>Vitis riparia</i>	1[ ]
	slightly open		2[ ]
	half open	Kober 5 BB	3[ ]
	wide open		4[ ]
	fully open	<i>Vitis vinifera</i>	5[ ]
<b>5.2</b> <b>(18)</b> <b>61-68</b> <b>O-151</b> <b>I-6.2.1</b>	<b>Flower: sexual organs</b>		
	fully developed stamens and no gynoecium	Rupestris du Lot	1[ ]
	fully developed stamens and reduced gynoecium	3309 Couderc	2[ ]
	fully developed stamens and fully developed gynoecium	Chasselas blanc B	3[ ]
	reflexed stamens and fully developed gynoecium	Ohanes B	4[ ]
<b>5.3</b> <b>(23)</b> <b>75-81</b> <b>O-068</b> <b>I-6.1.23</b>	<b>Mature leaf: number of lobes</b>		
	none	Chardonnay B	1[ ]
	three	Chenin blanc B	2[ ]
	five	Chasselas blanc B	3[ ]
	seven	Müller Thurgau B	4[ ]
	more than seven	Hebron B	5[ ]

Codes/ Stages	Characteristics	Example Varieties	Note
<b>5.4 75-81 (26) O-079 I-6.1.30</b>	<b>Mature leaf: arrangement of lobes of petiole sinus</b>		
	very wide open	Rupestris du Lot	1[ ]
	wide open	Riparia Gloire de Montpellier	2[ ]
	half open	Aramon noir N	3[ ]
	slightly open	Sauvignon B	4[ ]
	closed	Chasselas blanc B	5[ ]
	slightly overlapped	Aubun N	6[ ]
	half overlapped	Riesling B	7[ ]
	strongly overlapped	Clairette B	8[ ]
very strongly overlapped	Domina N	9[ ]	
<b>5.5 81 (35) O-303 I-7.1.4</b>	<b>Only varieties for fruit production: Time of beginning of berry ripening (veraison)</b>		
	very early	Perle de Csaba B	1[ ]
	early	Chasselas blanc B	3[ ]
	medium	Riesling B	5[ ]
	late	Carignan N	7[ ]
very late	Olivette noire N	9[ ]	

Codes/ Stages	Characteristics	Example Varieties	Note
<b>5.6 89</b> <b>(40) O-223</b> <b>I-6.2.6</b>	<b>Berry: shape in profile</b>		
	oblong	Kahlili belyi B	1[ ]
	elliptic	Olivette noire N	2[ ]
	broad elliptic	Müller Thurgau B	3[ ]
	circular	Chasselas blanc B	4[ ]
	oblate	Nobling B	5[ ]
	ovate	Bicane B	6[ ]
	obtuse ovate	Ahmeur bou Ahmeur Rs	7[ ]
	obovate	Muscat d'Alexandrie B	8[ ]
corniform	Santa Paula B	9[ ]	
<b>5.7 89</b> <b>(41) O-225</b> <b>I-6.2.8</b>	<b>Berry: color of skin (without bloom)</b>		
	yellow-green	Chasselas blanc B	1[ ]
	rose	Chasselas rose Rs	2[ ]
	red	Molinera gorda Rg	3[ ]
	grey-red	Pinot gris G	4[ ]
	dark red violet	Cardinal Rg	5[ ]
blue black	Pinot noir N	6[ ]	
<b>5.8 89</b> <b>(44) O-230</b> <b>I-6.2.9</b>	<b>Berry: anthocyanin coloration of flesh</b>		
	absent or very weak	Pinot noir N	1[ ]
	weak	Gamay de Bouze N	3[ ]
	medium	Gamay de Chaudenay N	5[ ]
	strong	Alicante Bouschet N	7[ ]
very strong		9[ ]	

Codes/ Stages	Characteristics	Example Varieties	Note
<b>5.9 89 (47) O-236 I-6.2.12</b>	<b>Berry: particular flavor</b>		
	none	Auxerrois B	1[ ]
	muscat	Muscat d'Alexandrie B	2[ ]
	foxy	Isabella N	3[ ]
	herbaceous	Cabernet Sauvignon N	4[ ]
	other than muscat, foxy or herbaceous	Riesling B	5[ ]
<b>5.10 89 (48) O-241 I-6.2.7</b>	<b>Berry: formation of seeds</b>		
	absent	Corinthe noir N	1[ ]
	rudimentary	Sultanina B	2[ ]
	complete	Riesling B	3[ ]



6. Similar varieties and differences from these varieties

Denomination of similar variety	Characteristic in which the similar variety is different <sup>o)</sup>	State of expression of similar variety	State of expression of candidate variety
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<sup>o)</sup> In the case of identical states of expressions of both varieties, please indicate the size of the difference.

7. Additional information which may help to distinguish the variety

7.1 Resistance to pests and diseases

7.2 Special conditions for the examination of the variety

(a) Fungicide treatment is necessary against the following diseases:

	yes	no	sometimes	unknown
– Peronospora (Plasmopara)	[ ]	[ ]	[ ]	[ ]
– Oidium	[ ]	[ ]	[ ]	[ ]
– Botrytis	[ ]	[ ]	[ ]	[ ]

(b) Use

– Wine grape variety	[ ]
– Table grape variety	[ ]
– Rootstock variety	[ ]
– Ornamental variety	[ ]
– Other (specify)	[ ]

.....

(c) Other conditions

7.3 Other information

A representative color photo of the variety should be added to the Technical Questionnaire.

8. Authorization for release

- (a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes        [ ]                      No        [ ]

- (b) Has such authorization been obtained?

Yes        [ ]                      No        [ ]

If the answer to that question is yes, please attach a copy of such an authorization.

[End of document]