UPOV

International Union for the Protection of New Varieties of Plants

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Technical Working Party on Testing Methods and Techniques **TWM/4/20 Add.**

Fourth Session
Cambridge, United Kingdom, June 2 to 5, 2026

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Date: June 15, 2026

ADDENDUM TO: THE OIV KEY ACTIONS ON GRAPEVINE GENETIC RESOURCES AND THE PUBLICATION OF THE 3RD EDITION OF THE OIV AMPELOGRAPHIC DESCRIPTORS

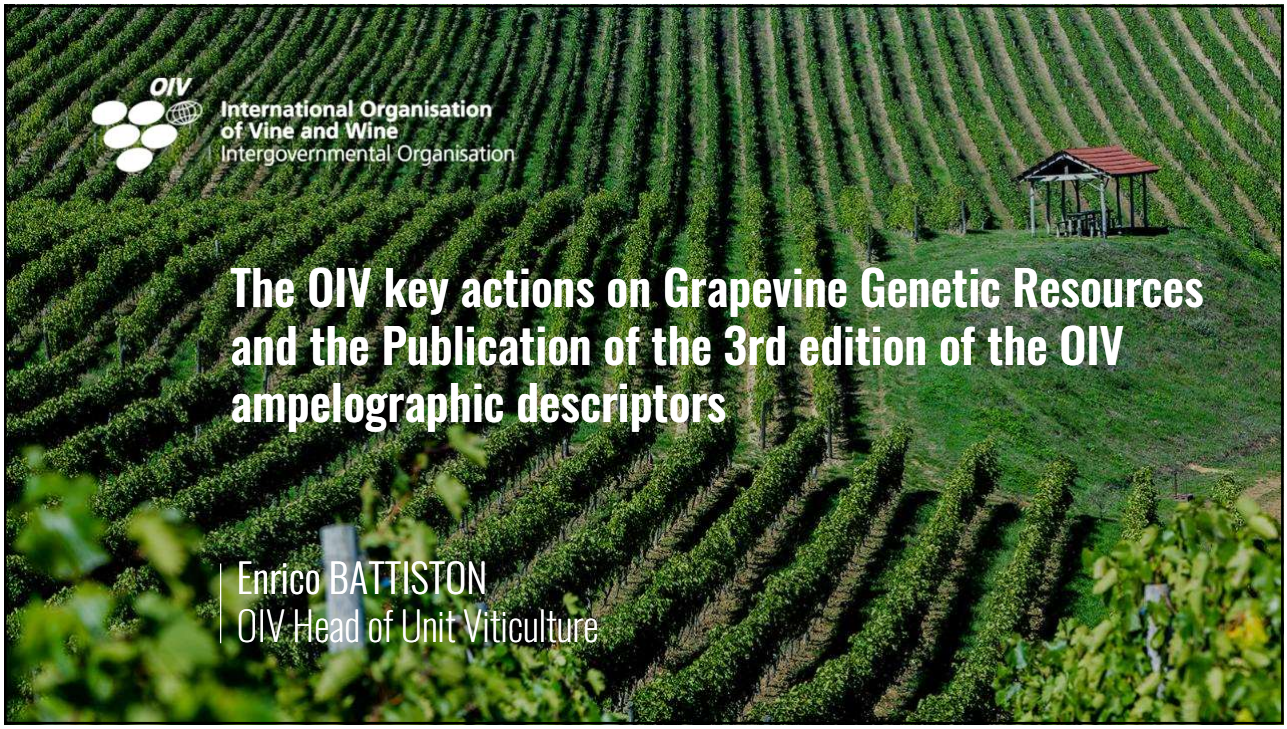
Document prepared by the Secretariat of the International Organisation of Vine and Wine (OIV)

Disclaimer: this document does not represent UPOV policies or guidance

The annex to this document contains a presentation “The OIV key actions on grapevine genetic resources and the publication of the 3rd edition of the OIV ampelographic descriptors”, made by the Secretariat of the International Organisation of Vine and Wine (OIV), at the fourth session of the TWM.

[Annex follows]

ANNEX


OIV
International Organisation
of Vine and Wine
Intergovernmental Organisation
The OIV key actions on Grapevine Genetic Resources and the Publication of the 3rd edition of the OIV ampelographic descriptors
Enrico BATTISTON
OIV Head of Unit Viticulture

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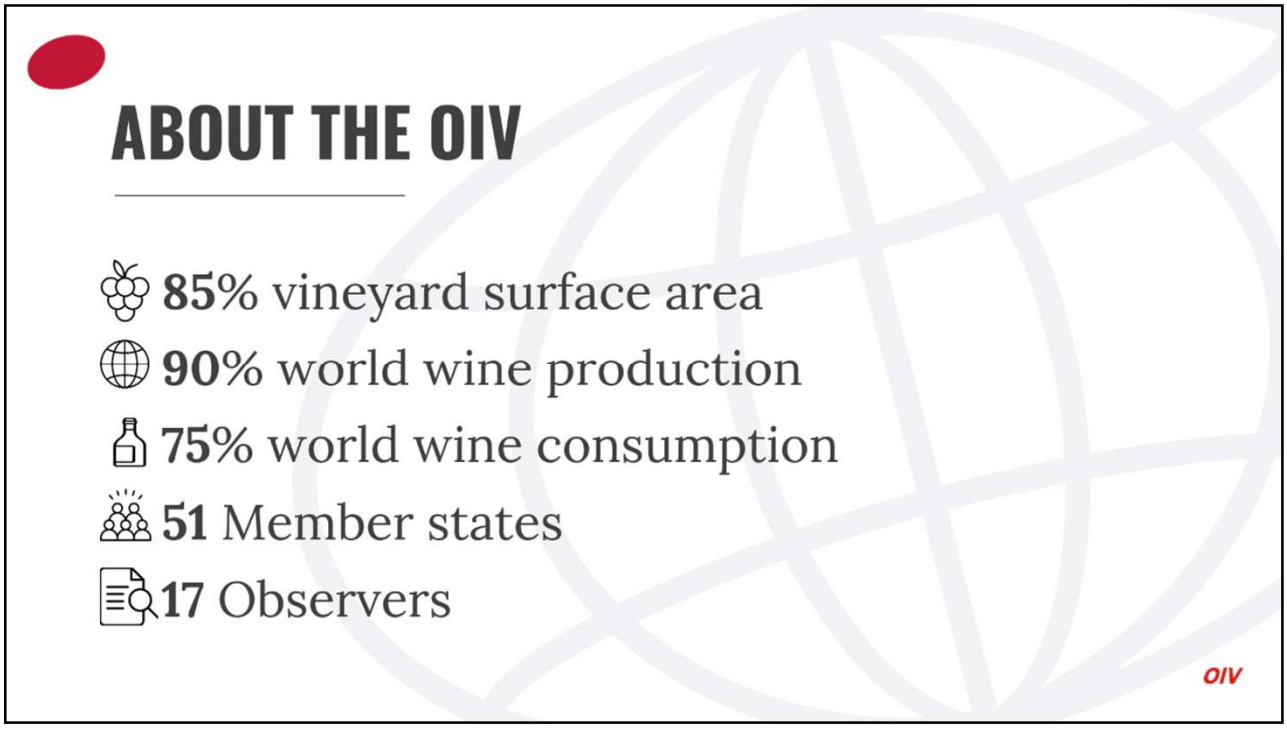
ABOUT THE OIV
85% vineyard surface area
90% world wine production
75% world wine consumption
51 Member states
17 Observers
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ABOUT THE OIV
Mission
Information
Cooperation
Harmonisation
Principles
Representative
Science-based
Consensus-based
Best practice gov
Added value
Values
Integrity
Inclusivity and diversity
Sustainability
OIV

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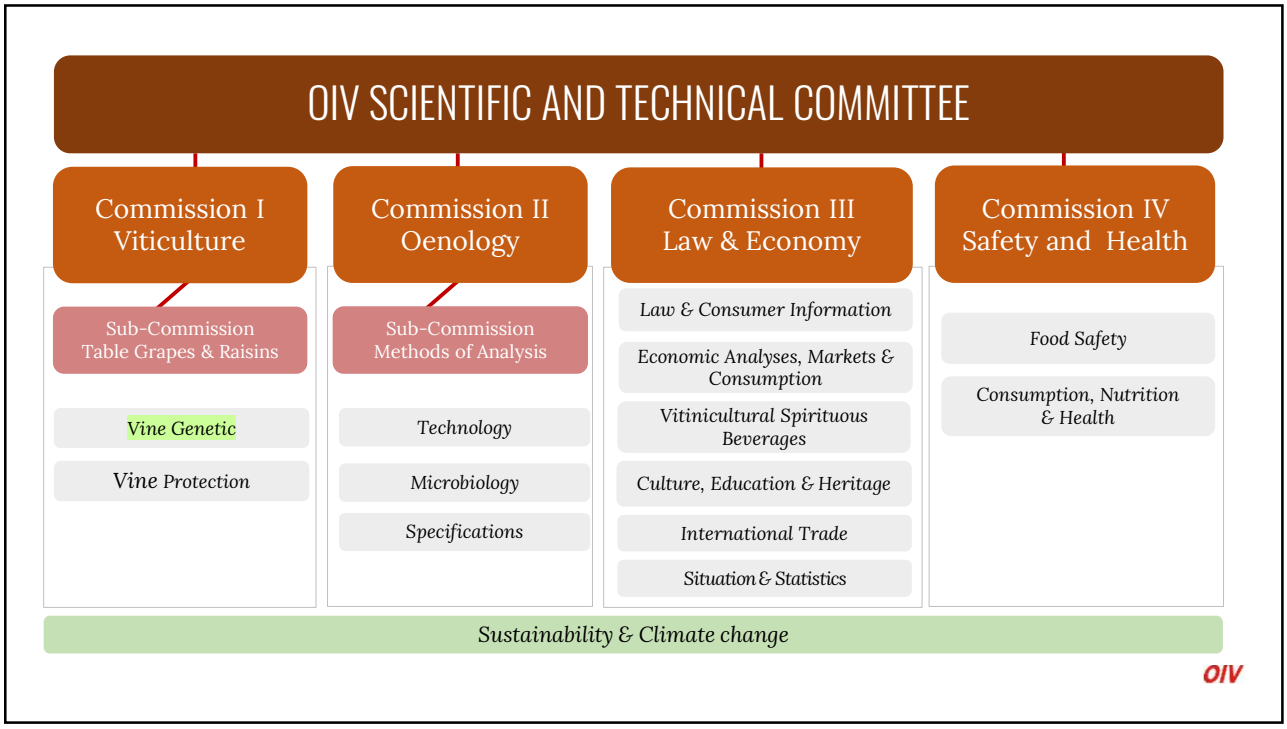
OIV SCIENTIFIC AND TECHNICAL COMMITTEE
Commission I Viticulture
Sub-Commission Table Grapes & Raisins
Vine Genetic
Vine Protection
Commission II Oenology
Sub-Commission Methods of Analysis
Technology
Microbiology
Specifications
Commission III Law & Economy
Law & Consumer Information
Economic Analyses, Markets & Consumption
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Culture, Education & Heritage
International Trade
Situation & Statistics
Commission IV Safety and Health
Food Safety
Consumption, Nutrition & Health
Sustainability & Climate change
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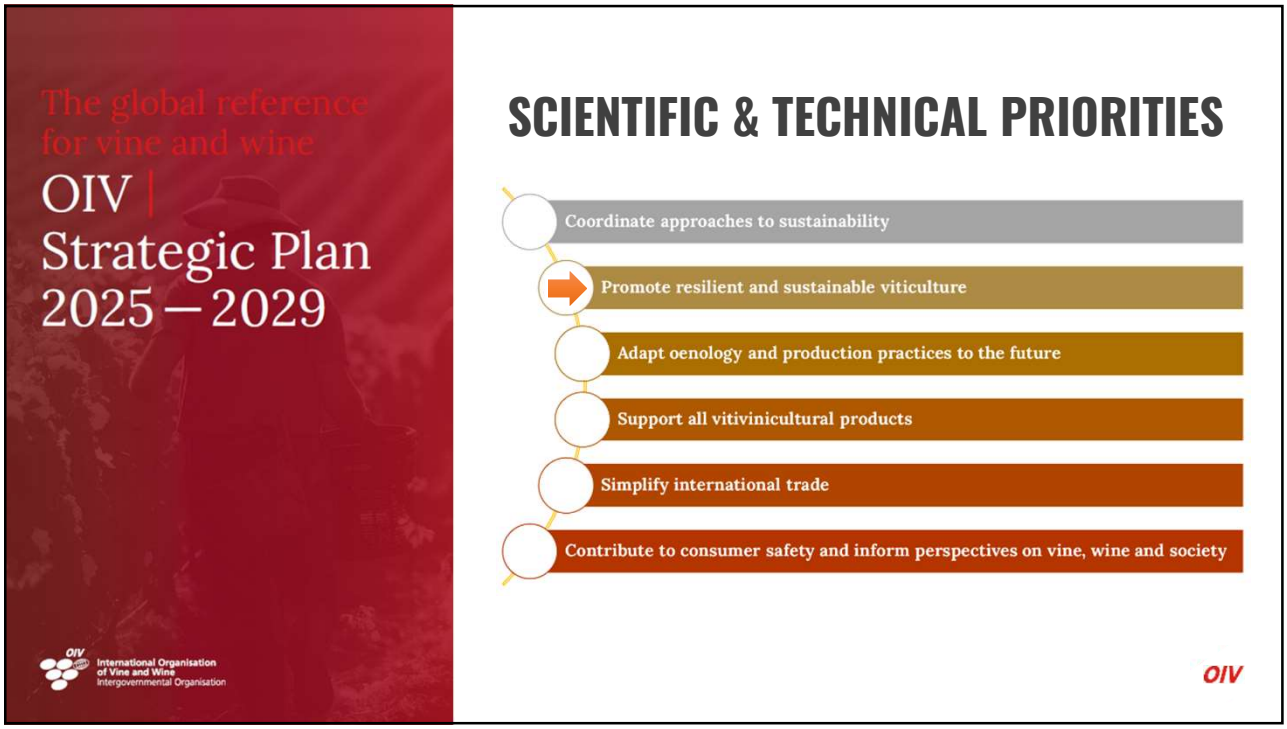
The global reference for vine and wine
OIV |
Strategic Plan
2025 – 2029
International Organisation of Vine and Wine
Intergovernmental Organisation
SCIENTIFIC & TECHNICAL PRIORITIES
Coordinate approaches to sustainability
Promote resilient and sustainable viticulture
Adapt oenology and production practices to the future
Support all vitivinicultural products
Simplify international trade
Contribute to consumer safety and inform perspectives on vine, wine and society
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INTERNATIONAL COOPERATION
UNWTO
oepp eppo
WORLD TRADE ORGANIZATION
ISO
OIML
MERCOSUR
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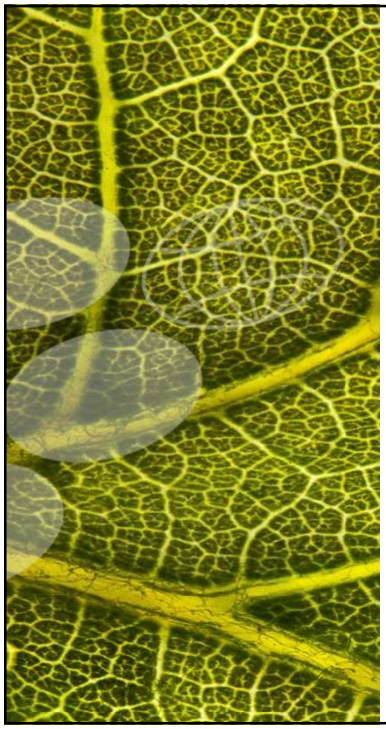

KEY ACTIONS ON GRAPEVINE GENETIC RESOURCES

The Harmonisation Process in Progress

- ✓ **"OIV Definitions related to different categories of grapevine plant material"**
  2019: Resolution Project VITI-GENET 19-610
- ✓ **"Viticultural and oenological evaluation of new disease resistant grape varieties"**
  2022: Resolution Project VITI-GENET 23-731
- ✓ **"NGTs in viticulture"**
  2025: Collective Expertise Document

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OIV DEFINITIONS OF GRAPEVINE PLANT MATERIAL

- ✓ Need to clarify the **potential differences** between the designations of different concepts related to classification and to vine varieties at an international level.
- ✓ Need to adopt the following **definitions** in relation to the classification of plant material used in the vitivinicultural field:

VARIETY **CULTIVAR** **ESSENTIALLY DERIVED VARIETY** **HYBRID**
RESISTANT/TOLLERANT VARIETY ...

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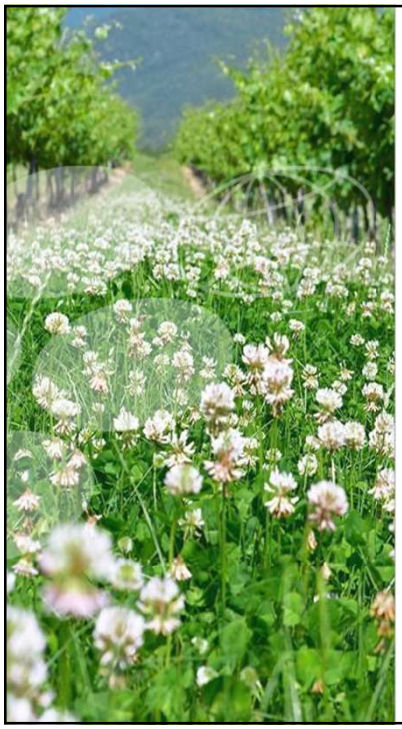

NEW DISEASE RESISTANT GRAPE VARIETIES

Main Objectives

- ✓ To develop a global **network to study** the viticultural/oenological performance of tolerant/resistant vine varieties under different pedoclimatic conditions
- ✓ To **consolidate knowledge** on resistant/tolerant vine varieties
- ✓ To provide appropriate and **territorialized information** to interested winegrowers, without being an obstacle to the dissemination and use of resistant/tolerant vine varieties
- ✓ To set an **international and harmonized protocol** for assessing the aptitude of resistant/tolerant vine varieties, to be reviewed periodically

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New Genomic Techniques in Viticulture

Challenges, impacts and contribution to the sector

International Organisation of Vine and Wine
Intergovernmental Organisation

Main Objectives

- ✓ Study the development of **New Genomic Techniques (NGTs)** - previously know as New Breeding Technologies - and its synergy with other current breeding and selection approaches.
- ✓ Explore the potential of NGTs for **grapevine improvement** and plant material development.
- ✓ Establish general principles that allow the study and evaluation and dissemination of NGTs in a **sustainable vitivinicultural sector model**,
- ✓ **Federate voluntary stakeholders** of the public and private sectors (national governments, local and regional governments, companies, trade organizations, NGOs, research facilities, etc.) around such a preeminent topic.

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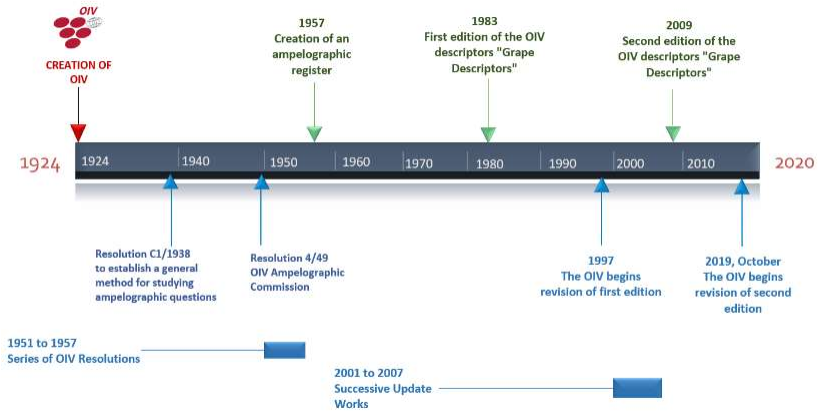
OIV & AMPELOGRAPHY: HISTORICAL MILESTONES



Lacombe *et al.* 2024

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3rd EDITION: WHY & HOW?

Objectives

A. General update and modernization of the 2nd edition (2009)

B. OIV Strategic Plan 2020-2024:
   - Axis V: “Facilitate the digital transition of the sector”
   - Axis VI: “Consolidate the role of the OIV as a global scientific, technical and cultural reference organization”

Methods

A. 2016: *ad hoc* group of OIV ampelography experts (GENET group) [...]

B. 2020-2024: 5 consecutive consultation cycles based on 2nd edition

C. 2023: Adoption of the Resolution OIV-VITI 702-2023 for the publication of the 3rd edition

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3rd EDITION: EXPERT WORKING GROUP

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3 Consiglio per la Ricerca in agricoltura e l'analisi dell'Economia Agraria,	Italy
4 Instituto Nacional de Investigação Agrária e Veterinária,	Portugal
5 Julius Kühn Institute,	Germany
6 Instituto Madrileño de Investigación y Desarrollo Rural, Agrario y Alimentario,	Spain
7 Instituto de Ciencias de la Vid y del Vino,	Spain
8 Institut National de Recherche pour l'Agriculture, l'Alimentation et l'Environnement,	France
9 University of Trás-os-Montes and Alto Douro,	Portugal
10 Fondazione Edmund Mach,	Italy
11 Organisation Internationale de la Vigne et du Vin,	OIV
12 Hochschule Geisenheim University,	Germany

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3rd EDITION: DESCRIPTORS

Unmodified descriptors x 70

- Pre-existing descriptors kept identical because satisfactory for title, definition, levels of expression and reference varieties

Modified descriptors x 79

- Improvements of **reference varieties** for each level of expression
- Improvements of **expression level scales** by extending or restricting
- **Definitions** or **titles** clarified

New descriptors x 27

- Resistance to biotic factors x 12
- Resistance to abiotic factors x 4
- Organ morphology x 8
- **Genetic markers (SSR) x 3**

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2nd EDITION: 6 GENETIC MARKERS (SSR)

Key information

a) Relative base pair distance to allele size n

b) Allele length

c) Example variety and Reference allele code

d) Further reference alleles

OIV 801	SSR-marker VVS2
OIV 802	SSR-marker VVMD5
OIV 803	SSR-marker VVMD7
OIV 804	SSR-marker VVMD27
OIV 805	SSR-marker VrZAG62
OIV 806	SSR-marker VrZAG79

REMARKS	Size range of alleles: from 123 to 161 base pairs. Different methods of analysis may result in small deviations (1-2 bp) in allele size. The shortest allele found within Genres081 has been chosen arbitrarily as being "n". Variety code: CF1 means Cabernet franc N shorter allele, CF2 means Cabernet franc N longer allele, etc. If a new allele is found, e.g. "n – 2", the corresponding variety code would be "33C1 - 2". For allele size codification of cultivars, some example varieties have to be run as standard within the same analysis. There are no restrictions on the method. But (1) the PCR conditions for example varieties and the varieties to be analyzed have to be the same; (2) it is recommended that in a 3-step PCR the final elongation step is at least 30 minutes.

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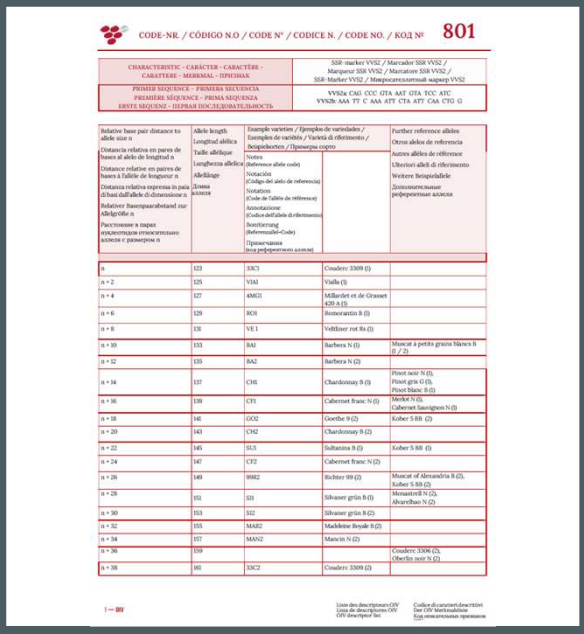


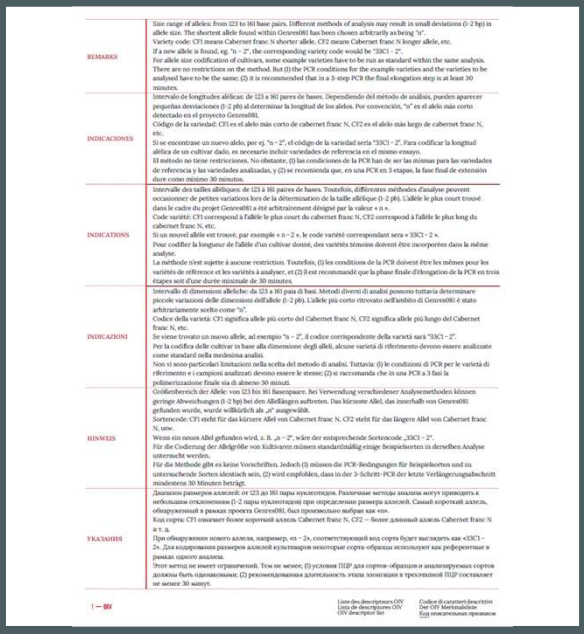
CODE-NR. / CÓDIGO N.O / CODE N° / CODICE N. / CODE NO. / КОД № 801

CHARACTERISTIC - CARÁCTER - CARACTÈRE - CARATTERE - MERKMAL - ПРИЗНАК	SSR-marker VVS2 / Marcador SSR VVS2 / Marqueur SSR VVS2 / Marcatore SSR VVS2 / SSR-Marker VVS2 / Микросателлитный маркер VVS2
PRIMER SEQUENCE - PRIMERA SECUENCIA - PREMIÈRE SÉQUENCE - PRIMA SEQUENZA - ERSTE SEQUENZ - ПЕРВАЯ ПОСЛЕДОВАТЕЛЬНОСТЬ	VVS2a: CAG CCC GTA AAT GTA TCC ATC VVS2b: AAA TT C AAA ATT CTA ATT CAA CTG G

Relative base pair distance to allele size n Distancia relativa en pares de bases al alelo de longitud n Distance relative en paires de bases à l'allèle de longueur n Distanza relativa espressa in paia di basi dall'allele di dimensione n Relativer Basenpaarabstand zur Allelgröße n Расстояние в парах нуклеотидов относительно аллеля с размером n	Allele length Longitud alélica Taille allélique Langhezza allelica Allellänge Длина аллеля	Example varieties / Ejemplos de variedades / Exemples de variétés / Varietà di riferimento / Beispielsorten / Примеры сорто Notes (Reference allele code) Notación (Código del alelo de referencia) Notation (Code de l'allèle de référence) Annotazione (Codice dell'allele di riferimento) Bestimmung (Referenzallel-Code) Примечания (код референтного аллеля)		Further reference alleles Otros alelos de referencia Autres allèles de référence Ulteriori alleli di riferimento Weitere Beispielallele Дополнительные референтные аллели
n	123	33C1	Coudere: 3309 (1)	
n + 2	125	V141	Viala (1)	
n + 4	127	4M021	Millardet et de Grasset 420 A (1)	
n + 6	129	RO1	Romorantin 8 (1)	
n + 8	131	VE1	Vethliner rot Rs (1)	
n + 10	133	BA1	Barbera N (1)	Muscat à petits grains blancs 8 (1 / 2)
n + 12	135	BA2	Barbera N (2)	
n + 14	137	CH1	Chardonnay 9 (1)	Pinot noir N (1), Pinot gris G (1), Pinot blanc B (1)
n + 16	139	CF1	Cabernet franc N (1)	Merlot N (1), Cabernet Sauvignon N (1)
n + 18	141	GO2	Goethe 9 (2)	Kober 5 BB (2)
n + 20	143	CH2	Chardonnay 8 (2)	
n + 22	145	SU3	Sultanina B (1)	Kober 5 BB (1)
n + 24	147	CF2	Cabernet franc N (2)	
n + 26	149	9082	Richter 99 (2)	Muscat of Alexandria B (2), Kober 5 BB (2)
n + 28	151	SI1	Silvaner grün B (1)	Monastrell N (2), Alvarelhao N (2)
n + 30	153	SI2	Silvaner grün B (2)	
n + 32	155	MA82	Madeleine Royale B (2)	
n + 34	157	MAN2	Mancin N (2)	
n + 36	159			Coudere: 3306 (2), Oberlin noir N (2)
n + 38	161	33C2	Coudere: 3309 (2)	

I — OIV

Liste des descripteurs OIV / Lista de descriptores OIV / OIV descriptor list — Codice di caratteri descrittivi / Der OIV Merkmalsliste / Код описательных признаков



REMARKS	Size range of alleles: from 123 to 161 base pairs. Different methods of analysis may result in small deviations (1-2 bp) in allele size. The shortest allele found within Genres081 has been chosen arbitrarily as being "n". Variety code: CF1 means Cabernet franc N shorter allele, CF2 means Cabernet franc N longer allele, etc. If a new allele is found, eg. "n - 2", the corresponding variety code would be "33C1 - 2". For allele size codification of cultivars, some example varieties have to be run as standard within the same analysis. There are no restrictions on the method, But (1) the PCR conditions for the example varieties and the varieties to be analysed have to be the same; (2) it is recommended that in a 3-step PCR the final elongation step is at least 30 minutes.
INDICACIONES	Intervalo de longitudes alélicas: de 123 a 161 pares de bases. Dependiendo del método de análisis, pueden aparecer pequeñas desviaciones (1-2 pb) al determinar la longitud de los alelos. Por convención, "n" es el alelo más corto detectado en el proyecto Genres081. Código de la variedad: CF1 es el alelo más corto de cabernet franc N, CF2 es el alelo más largo de cabernet franc N, etc. Si se encontrase un nuevo alelo, por ej. "n - 2", el código de la variedad sería "33C1 - 2". Para codificar la longitud alélica de un cultivar dado, es necesario incluir variedades de referencia en el mismo ensayo. El método no tiene restricciones. No obstante, (1) las condiciones de la PCR han de ser las mismas para las variedades de referencia y las variedades analizadas, y (2) se recomienda que, en una PCR en 3 etapas, la fase final de extensión dure como mínimo 30 minutos.
INDICATIONS	Intervalle des tailles alléliques: de 123 à 161 paires de bases. Toutefois, différentes méthodes d'analyse peuvent occasionner de petites variations lors de la détermination de la taille allélique (1-2 pb). L'allèle le plus court trouvé dans le cadre du projet Genres081 a été arbitrairement désigné par la valeur « n ». Code variété: CF1 correspond à l'allèle le plus court du cabernet franc N, CF2 correspond à l'allèle le plus long du cabernet franc N, etc. Si un nouvel allèle est trouvé, par exemple « n - 2 », le code variété correspondant sera « 33C1 - 2 ». Pour codifier la longueur de l'allèle d'un cultivar donné, des variétés témoins doivent être incorporées dans la même analyse. La méthode n'est sujette à aucune restriction. Toutefois, (1) les conditions de la PCR doivent être les mêmes pour les variétés de référence et les variétés à analyser, et (2) il est recommandé que la phase finale d'élongation de la PCR en trois étapes soit d'une durée minimale de 30 minutes.
INDICAZIONI	Intervallo di dimensioni alleliche: da 123 a 161 paia di basi. Metodi diversi di analisi possono tuttavia determinare piccole variazioni delle dimensioni dell'allele (1-2 pb). L'allele più corto ritrovato nell'ambito di Genres081 è stato arbitrariamente scelto come "n". Codice della varietà: CF1 significa allele più corto del Cabernet franc N, CF2 significa allele più lungo del Cabernet franc N, etc. Se viene trovato un nuovo allele, ad esempio "n - 2", il codice corrispondente della varietà sarà "33C1 - 2". Per la codifica delle cultivar in base alla dimensione degli alleli, alcune varietà di riferimento devono essere analizzate come standard nella medesima analisi. Non vi sono particolari limitazioni nella scelta del metodo di analisi. Tuttavia: (1) le condizioni di PCR per le varietà di riferimento e i campioni analizzati devono essere le stesse; (2) si raccomanda che in una PCR a 3 fasi la polimerizzazione finale sia di almeno 30 minuti.
HINWEIS	Größenbereich der Allele: von 123 bis 161 Basenpaare. Bei Verwendung verschiedener Analysemethoden können geringe Abweichungen (1-2 bp) bei den Allellängen auftreten. Das kürzeste Allel, das innerhalb von Genres081 gefunden wurde, wurde willkürlich als „n" ausgewählt. Sortencode: CF1 steht für das kürzere Allel von Cabernet franc N, CF2 steht für das längere Allel von Cabernet franc N, usw. Wenn ein neues Allel gefunden wird, z. B. „n - 2", wäre der entsprechende Sortencode „33C1 - 2". Für die Codierung der Allelgröße von Kultivaren müssen standardmäßig einige Beispielsorten in derselben Analyse untersucht werden. Für die Methode gibt es keine Vorschriften. Jedoch (1) müssen die PCR-Bedingungen für Beispielsorten und zu untersuchende Sorten identisch sein, (2) wird empfohlen, dass in der 3-Schritt-PCR der letzte Verlängerungsabschnitt mindestens 30 Minuten beträgt.
УКАЗАНИЯ	Диапазон размеров аллелей: от 123 до 161 пары нуклеотидов. Различные методы анализа могут приводить к небольшим отклонениям (1-2 пары нуклеотидов) при определении размера аллелей. Самый короткий аллель, обнаруженный в рамках проекта Genres081, был произвольно выбран как «n». Код сорта: CF1 означает более короткий аллель Cabernet franc N, CF2 – более длинный аллель Cabernet franc N и т. д. При обнаружении нового аллеля, например, «n - 2», соответствующий код сорта будет выглядеть как «33C1 - 2». Для кодирования размеров аллелей культиваров некоторые сорта-образцы используют как референтные в рамках одного анализа. Этот метод не имеет ограничений. Тем не менее, (1) условия ПЦР для сортов-образцов и анализируемых сортов должны быть одинаковыми; (2) рекомендованная длительность этапа элонгации в трехэтапной ПЦР составляет не менее 30 минут.

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Liste des descripteurs OIV / Lista de descriptores OIV / OIV descriptor list — Codice di caratteri descrittivi / Der OIV Merkmalsliste / Код описательных признаков

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3 NEW GENETIC MARKERS (SSR)

OIV 807	SSR-marker VVMD32
OIV 808	SSR-marker VVMD25
OIV 809	SSR-marker VVMD28

SSR-marker VVMD32

- Size range of alleles: from 217 to 285 base pairs
- If a new allele is found, e.g. "n – 2“, the corresponding variety code would be "5C - 2“

SSR-marker VVMD25

- Size range of alleles: from 237 to 273 base pairs
- If a new allele is found, eg. "n – 2“, the corresponding variety code would be "VIA - 2“

SSR-marker VVMD28

- Size range of alleles: from 217 to 285 base pairs
- If a new allele is found, e.g. "n – 2“, the corresponding variety code would be "5C - 2“

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3rd EDITION: ADDITIONAL INFORMATION

Table of correspondence between the codifications:

OIV - **UPOV** - Alliance Bioversity CIAT

Characteristic	OIV Code	Code UDC	UPOV	IPGRI
Young Shoot: aperture of tip	001	1.1.1.1	2	6.1.1
Young Shoot: distribution of anthocyanin coloration on prostrate hairs of tip	002	1.1.1.2		
Young Shoot: intensity of anthocyanin coloration on prostrate	003	1.1.1.3	4	6.1.2
Young Shoot: density of prostrate hairs on tip	004	1.1.1.4	3	6.1.3
Young Shoot: density of erect hairs on tip	005	1.1.1.5	5	6.1.4
Shoot: attitude (before tying)	006	1.2.0.1	9	6.1.5
Shoot: colour of dorsal side of internodes	007	1.2.1.1	10	6.1.6
Shoot: colour of ventral side of internodes	008	1.2.1.2	11	6.1.7
Shoot: colour of dorsal side of nodes	009	1.2.2.1	12	6.1.8
Shoot: colour of ventral side of nodes	010	1.2.2.2	13	6.1.9

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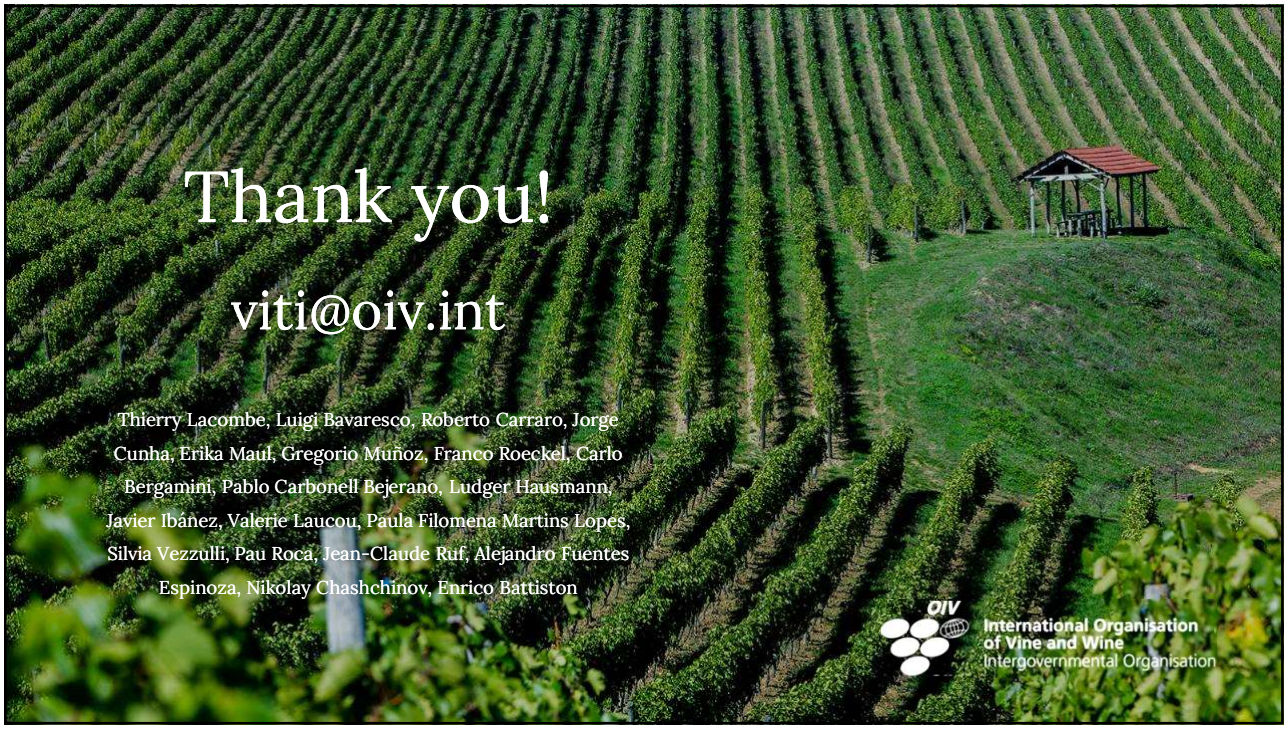

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