



These Test Guidelines have been superseded by a later version. The latest adopted version of Test Guidelines can be found at http://www.upov.int/test_guidelines/en/list.jsp

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

Diese Prüfungsrichtlinien wurden durch eine neuere Fassung ersetzt. Die neueste angenommene Fassung von Prüfungsrichtlinien ist unter http://www.upov.int/test_guidelines/de/list.jsp zu finden.

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.



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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

LEAF CHICORY
(Cichorium intybus L.
partim)

GENEVA
1996

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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.

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
I. Subject of these Guidelines	3
II. Material Required	3
III. Conduct of Tests	3
IV. Methods and Observations.....	3
V. Grouping of Varieties	4
VI. Characteristics and Symbols	4
VII. Table of Characteristics	5
VIII. Explanations on the Table of Characteristics	13
IX. Literature	14
X. Technical Questionnaire	15

I. Subject of these Guidelines

These Test Guidelines apply to all varieties of *Cichorium intybus* L. partim, excluding witlof and industrial chicory.

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the seed 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. The minimum quantity of seed to be supplied by the applicant in one or several samples should be:

25 g.

The seed should at least meet the minimum requirements for germination capacity, moisture content and purity for marketing seed in the country in which the application is made. The germination capacity should be as high as possible.

2. 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. The minimum duration of tests should normally be two similar growing periods.
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 100 plants which should be divided between two or more replicates. 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 determined by measurement or counting should be made on 40 plants or parts of 40 plants.

2. For the assessment of uniformity of hybrid varieties a population standard of 3% with an acceptance probability of at least 95% should be applied to off-types excluding clearly recognisable inbred plants. In the case of a sample size of 100 plants, the maximum number of off-types allowed would be 6. In addition a population standard of 5% with the same acceptance probability should be applied to clearly recognizable inbred plants. In the case of a sample size of 100 plants the additional maximum number of clearly recognizable inbred plants allowed would be 9.
3. All observations on the leaf should be made on the outer leaves of fully developed plants; all observations on the head should be made at harvest maturity.

V. Grouping of Varieties

1. The collection of varieties to be grown should be divided into groups to facilitate the assessment of distinctness. 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.
2. It is recommended that the competent authorities use the following characteristics for grouping varieties:
 - (a) Leaf: color (excluding midrib) (characteristic 7)
 - (b) Leaf: anthocyanin coloration at harvest maturity (characteristic 11)
 - (c) Plant: head formation (characteristic 19)
 - (d) Head: shape in longitudinal section (characteristic 23).

VI. Characteristics and Symbols

1. To assess distinctness, homogeneity 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 the different characteristics.
3. Legend:
 - (*) Characteristics that should be used on all varieties in every growing period over which the 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.

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

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. (*)	Young plant: anthocyanin coloration <u>at 5-6 leaf stage</u>	Plantule: pigmentation anthocyanique <u>au stade 5 à 6 feuilles</u>	Jungpflanze: Anthocyanfärbung <u>im 5- bis 6- Blattstadium</u>	Planta joven: pigmentación antociánica <u>en estado 5 a 6 hojas</u>	
	absent	absente	fehlend	ausente	Pan di zucchero 1
	present	présente	vorhanden	presente	Palla rossa 2 9
2. (*)	Plant: diameter (plant fully developed)	Plante: diamètre (plante entièrement développée)	Pflanze: Durchmesser (Pflanze voll entwickelt)	Planta: diámetro (planta totalmente desarrollada)	
	very small	très petit	sehr klein	muy pequeño	Silla 1
	small	petit	klein	pequeño	Palla rossa 2 3
	medium	moyen	mittel	medio	Palla rossa 3 5
	large	grand	groß	grande	Pan di zucchero 7
	very large	très grand	sehr groß	muy grande	Catalogna puntarelle a foglia stretta 9
3. (*)	Leaf: attitude	Feuille: port	Blatt: Haltung	Hoja: porte	
	erect	dressé	aufrecht	erecto	Vérone 1
	semi-erect	demi-dressé	halbaufrecht	semierecto	Palla rossa 2 3
	horizontal	horizontal	waagrecht	horizontal	Selvatica da campo 5
4. (*)	Leaf: length (at harvest maturity)	Feuille: longueur (à maturité de récolte)	Blatt: Länge (zur Erntereife)	Hoja: longitud (en la madurez de cosecha)	
	very short	très courte	sehr kurz	muy corta	Silla, Zuccherina di Trieste 1
	short	courte	kurz	corta	Palla rossa 2 3
	medium	moyenne	mittel	media	Pan di zucchero 5
	long	longue	lang	larga	Rossa di Treviso 7
	very long	très longue	sehr lang	muy larga	Catalogna a foglie frastagliate 9

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
5. (*)	Leaf: width (as for 4)	Feuille: largeur (comme pour 4)	Blatt: Breite (wie unter 4)	Hoja: anchura (como para 4)		
	very narrow	très étroite	sehr schmal	muy estrecha	Catalogna puntarelle a foglia stretta	1
	narrow	étroite	schmal	estrecha	Rossa di Treviso 2	3
	medium	moyenne	mittel	media	Silla, Pan di zucchero	5
	broad	large	breit	ancha	Variegata di Chioggia, Bianca invernale	7
	very broad	très large	sehr breit	muy ancha		9
6. (*)	Leaf: shape	Feuille: forme	Blatt: Form	Hoja: forma		
	narrow elliptic	elliptique étroit	schmal elliptisch	elíptica estrecha	Catalogna pugliese	1
	elliptic	elliptique	elliptisch	elíptica	Vérone	2
	broad elliptic	elliptique large	breit elliptisch	elíptica ancha	Pan di zucchero	3
	round	ronde	rund	redonda	Pluto, Silla	4
7. (*)	Leaf: color (excluding midrib)	Feuille: couleur (à l'exclusion de la nervure médiane)	Blatt: Farbe (Mittelrippe ausgenommen)	Hoja: color (excluyendo el nervio central)		
	yellow	jaune	gelb	amarillo	Bianca invernale	1
	green	verte	grün	verde	Pan di zucchero	2
	red	rouge	rot	rojo	Red Devil	3
8. (*)	Leaf: intensity of color (as for 7)	Feuille: intensité de la couleur (comme pour 7)	Blatt: Intensität der Farbe (wie unter 7)	Hoja: intensidad del color (como para 7)		
	light	claire	hell	claro		3
	medium	moyenne	mittel	medio		5
	dark	foncée	dunkel	oscuro		7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
9.	Leaf: glossiness	Feuille: brillance	Blatt: Glanz	Hoja: brillo		
	weak	faible	gering	débil	Scarpia, Jupiter	3
	medium	moyenne	mittel	medio	Chioggia, Vérone	5
	strong	forte	stark	fuerte	Vulcano	7
10. (*)	Leaf: color of midrib	Feuille: couleur de la nervure médiane	Blatt: Farbe der Mittelrippe	Hoja: color del nervio central		
	whitish	blanchâtre	weißlich	blancuzco	Bianca invernale	1
	green	verte	grün	verde	Pan di zucchero	2
	red	rouge	rot	rojo	Medusa, Silla	3
11. (*)	Leaf: anthocyanin coloration at <u>harvest maturity</u>	Feuille: pigmentation anthocyanique à <u>maturité de récolte</u>	Blatt: Anthocyanfärbung <u>zur Erntereife</u>	Hoja: pigmentación antociánica <u>en la madurez de cosecha</u>		
	absent	absente	fehlend	ausente	Pan di zucchero	1
	present	présente	vorhanden	presente	Red Devil	9
12.	Leaf: anthocyanin distribution (as for 4)	Feuille: distribution de l'anthocyane (comme pour 4)	Blatt: Verteilung des Anthocyan (wie unter 4)	Hoja: distribución de la antocianina (como para 4)		
	localized	localisée	lokal begrenzt	localizada	Variegata di Lusìa	1
	entire	répartie sur toute la surface	auf der gesamten Blattfläche	esparcida	Palla rossa 2	2
13. (*)	Leaf: type of anthocyanin distribution (as for 4)	Feuille: type de distribution de l'anthocyane (comme pour 4)	Blatt: Art der Verteilung des Anthocyan (wie unter 4)	Hoja: tipo de distribución de la antocianina (como para 4)		
	diffused only	seulement diffuse	nur diffus	sólamente difusa	Red Devil	1
	in spots only	seulement en taches	nur in Flecken	sólamente en manchas	Variegata di Lusìa	2
	diffused and in spots	diffuse et en taches	diffus und in Flecken	difusa y en manchas	Variegata di Castelfranco	3

English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
14. Leaf: profile of upper surface	Feuille: profil de la face supérieure	Blatt: Profil der Oberseite	Hoja: perfil del haz		
strongly concave	fortement concave	stark konkav	fuertemente cóncavo	Palla rosa 2	1
weakly concave	faiblement concave	schwach konkav	débilmente cóncavo		2
flat	plane	eben	plano	Rossa di Treviso 2	3
weakly convex	faiblement convexe	schwach konvex	débilmente convexo		4
strongly convex	fortement convexe	stark konvex	fuertemente convexo		5
15. Leaf: blistering (*)	Feuille: cloquère	Blatt: Blasigkeit	Hoja: abullonado		
absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Vérone	1
weak	faible	gering	débil	Villa, Pan di zucchero	3
medium	moyenne	mittel	media		5
strong	forte	stark	fuerte	Jupiter	7
very strong	très forte	sehr stark	muy fuerte		9
16. Leaf: undulation of margin	Feuille: ondulation du bord	Blatt: Randwellung	Hoja: ondulación del margen		
absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Rossa di Treviso 2	1
weak	faible	gering	débil	Variegata di Chioggia	3
medium	moyenne	mittel	media	Barba di cappuccino, 24 Ore	5
strong	forte	stark	fuerte		7
very strong	très forte	sehr stark	muy fuerte		9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
17.	Leaf: depth of incisions of margin	Feuille: profondeur des incisions du bord	Blatt: Tiefe der Randeinschnitte	Hoja: profundidad de las incisiones del margen		
	absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Palla rossa 2	1
	weak	faible	gering	débil	A grumolo bionda	3
	medium	moyenne	mittel	media	24 Ore	5
	strong	forte	stark	fuerte	Catalogna puntarelle di Galatina	7
	very strong	très forte	sehr stark	muy fuerte	Catalogna puntarelle di Gaeta	9
18.	Leaf: type of incision of margin	Feuille: type d'incision du bord	Blatt: Art der Randeinschnitte	Hoja: tipo de incisión del margen		
	sinuate	sinué	gebuchtet	sinuosa	Zucherina di Trieste	1
	dentate	denté	gezähnt	dentada	Catalogna gigante di Chioggia, Karyvos	2
	serrate	dentelé	gesägt	serrada	Catalogna a foglie frastagliate	3
19. (*)	Plant: head formation	Plante: formation de la pomme	Pflanze: Kopfbildung	Planta: formación del repollo		
	absent	absente	fehlend	ausente	Catalogna gigante di Chioggia	1
	present	présente	vorhanden	presente	Palla rossa 2	9
20. (*)	Plant: intensity of head formation	Plante: intensité de la formation de la pomme	Pflanze: Stärke der Kopfbildung	Planta: intensidad de la formación del repollo		
	weak	faible	gering	débil	Améliorée blonde	3
	medium	moyenne	mittel	media	A grumolo bionda, Pan di zucchero	5
	strong	forte	stark	fuerte	Palla rossa 2	7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
21.	Head: length	Pomme: longueur	Kopf: Länge	Repollo: longitud		
(*)						
	short	courte	kurz	corta	Palla rossa 2	3
	medium	moyenne	mittel	media	Bianca di Milano, Jupiter	5
	long	longue	lang	larga	Pan di zucchero	7
22.	Head: diameter	Pomme: diamètre	Kopf: Durchmesser	Repollo: diámetro		
(*)						
	small	petit	klein	pequeño	Silla	3
	medium	moyen	mittel	medio	Palla rossa 2	5
	large	grand	groß	grande	Palla rossa 5	7
23.	Head: shape in longitudinal section	Pomme: forme en section longitudinale	Kopf: Form im Längsschnitt	Repollo: forma en sección longitudinal		
(*)						
	rectangular	rectangulaire	rechteckig	rectangular		1
	elliptic	elliptique	elliptisch	elíptico	Nerone, Vulcane	2
	ovate	ovale	eiförmig	ovalado	Bianca di Milano	3
	circular	arrondie	rund	circular	Silla	4
	transverse elliptic	elliptique transverse	quer elliptisch	elíptico transverso	Palla rossa 2	5
24.	Head: main color of outer leaves	Pomme: couleur principale des feuilles externes	Kopf: Hauptfarbe der Außenblätter	Repollo: color principal de las hojas exteriores		
(*)						
	yellow	jaunes	gelb	amarillas	Bianca invernale	1
	green	vertes	grün	verdes	Pan di zucchero	2
	red	rouges	rot	rojas	Red Devil	3
25.	Head: intensity of color of outer leaves	Pomme: intensité de la couleur des feuilles externes	Kopf: Intensität der Farbe der Außenblätter	Repollo: intensidad del color en las hojas exteriores		
(*)						
	light	claire	hell	claro		3
	medium	moyenne	mittel	medio		5
	dark	foncée	dunkel	oscuro		7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
26. (*)	Head: anthocyanin coloration of outer leaves	Pomme: pigmentation anthocyanique des feuilles externes	Kopf: Anthocyan-färbung der Außenblätter	Repollo: pigmentación antocianica de las hojas exteriores		
	absent	absente	fehlend	ausente	Pan di zucchero	1
	present	présente	vorhanden	presente	Red Devil, Variegata di Lusia	9
27. (*)	Head: anthocyanin distribution in outer leaves	Pomme: distribution de l'anthocyane sur les feuilles externes	Kopf: Anthocyan- verteilung in den Außenblättern	Repollo: distribución de la antocianina en las hojas exteriores		
	localized	localisée	lokal begrenzt	localizada	Variegata di Lusia	1
	entire	répartie sur toute la surface	auf der gesamten Blattfläche	esparcida	Red Devil	2
28. (*)	Plant: stem: formation at harvest maturity	Plante; formation d'une tige à l'époque de maturité de récolte	Pflanze: Stengelbildung zum Zeitpunkt der Ernte	Planta: formación de tallo en la fecha de madurez de cosecha		
	absent	absente	fehlend	ausente	Palla rossa 2	1
	present	présente	vorhanden	presente	Catalogna puntarelle a foglia frastagliata	9
29.	<u>Stem forming types only:</u> Stem: degree of fasciation	<u>Seulement les variétés formant une tige:</u> Tige: intensité de la fasciation	<u>Nur Sorten mit Stengelbildung:</u> Stengel: Stärke der Verbänderung	<u>Solo variedades que forman tallo:</u> Tallo: grado de fasciación		
	weak	faible	gering	baja	Clio, Koryvos	3
	medium	moyenne	mittel	media	Catalogna pugliese	5
	strong	forte	stark	alta	Catalogna puntarelle di Gaeta	7
30.	Flower: color	Fleur: couleur	Blüte: Farbe	Flor: color		
	white	blanche	weiß	blanco	Koryvos	1
	blue	bleue	blau	azul	Barba di cappuccino	2

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
31. (*)	Time of harvest maturity	Époque de maturité de récolte	Zeitpunkt der Erntereife	Fecha de madurez de cosecha		
	early	précoce	früh	temprana	Palla rossa 2	3
	medium	moyenne	mittel	media	Pan di zucchero	5
	late	tardive	spät	tardía	A grumola verde, Barba di cappuccino	7
32.	Time of beginning of bolting	Époque de début de montaison	Zeitpunkt des Schoßbeginns	Fecha del comienzo de la salida a flor		
	very early	très précoce	sehr früh	muy temprana	Catalogna pugliese, Koryvos	1
	early	précoce	früh	temprana	Poncho	3
	medium	moyen	mittel	media	Verone	5
	late	tardif	spät	tardía	Giulio	7
	very late	très tardif	sehr spät	muy tardía	Lady	9

VIII. Explanation on the Table of Characteristics

no specific explanations

IX. Literature

Adinolfi, A., Bianchi, M. & Frusciante, E., 1995: "Caratterizzazione Morfo-Fisiologica Delle Varietà di Cicoria a Foglia Verde Iscritte al Registro Nazionale," Ente Nazionale Sementi Elette (E.N.S.E.), Milan, Quaderno n. Dell' E.N.S.E., No. 45.

Ryder, E., 1979: "Leafy Salad Vegetable," AVI Publishing Company, Westport, Connecticut.

X. Technical Questionnaire

	Reference Number (not to be filled in by the applicant)
<p>TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p>	
1. Species	<p><i>Cichorium intybus</i> L. partim LEAF CHICORY</p>
2. Applicant (Name and address)	
3. Proposed denomination or breeder's reference	
4. Information on origin, maintenance and reproduction of the variety	

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).

Characteristics	Example Varieties	Note
5.1 Leaf: color (excluding midrib) (7)		
yellow	Bianca invernale	1[]
green	Pan di zucchero	2[]
red	Red Devil	3[]
5.2 Leaf: color of midrib (10)		
whitish	Bianca invernale	1[]
green	Pan di zucchero	2[]
red	Medusa, Silla	3[]
5.3 Leaf: anthocyanin coloration <u>at harvest maturity</u> (11)		
absent	Pan di zucchero	1[]
present	Red Devil	9[]
5.4 Plant: head formation (19)		
absent	Catalogna gigante di Chioggia	1[]
present	Palla rossa 2	9[]
5.5 Head: shape of longitudinal section (23)		
rectangular		1[]
elliptic	Nerone, Vulcano	2[]
ovate	Bianci di Milano	3[]
circular	Silla	4[]
transverse elliptic	Palla rossa 2	5[]

Characteristics	Example Varieties	Note
5.6 Head: main color of outer leaves (24)		
yellow	Bianca invernale	1[]
green	Pan di zucchero	2[]
red	Red Devil	3[]
5.7 Head: anthocyanin coloration of outer leaves (26)		
absent	Pan di zucchero	1[]
present	Red Devil, Variegata di Lusia	9[]
5.8 Plant : stem formation at harvest maturity (28)		
absent	Palla rossa 2	1[]
present	Catalogna puntarelle a foglia frastagliata	9[]

6. Similar varieties and differences between these varieties

Denomination of similar variety	Characteristic in which the similar variety is different ^{o)}	State of expression of similar variety	State of expression of candidate variety

^{o)} 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) Cultural type of plant

- cutting []
- head []
- leaves and stems []

(b) Other conditions

7.3 Other information

[End of document]