



TG/184/3

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

GLOBE ARTICHOKE

(Cynara scolymus L.)
(Cynara cardunculus var. scolymus L.)

GENEVA
2001



These Test Guidelines have been superseded by a later version.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

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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

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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.

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GLOBE ARTICHOKE

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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.

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I. Subject of these Guidelines

These Test Guidelines apply to all varieties of *Cynara scolymus* L. (*Cynara cardunculus* var. *scolymus* L.).

II. Material Required

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

- (a) seed propagated varieties: 50 g of seed,
- (b) vegetatively propagated varieties: 60 plants.

The plant material supplied should be visibly healthy, not lacking in vigour or affected by any important pest or disease and virus free. 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 independent growing cycles.

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 40 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. Unless otherwise indicated, all observations determined by measurement, weighing or counting should be made on 10 plants or parts taken from each of 10 plants.
2. For the assessment of uniformity, a population standard of 5% with an acceptance probability of at least 95% should be applied.

For seed propagated varieties: in the case of a sample size of 40 plants, the maximum number of off-types allowed would be 4 (the number includes plants resulting from the selfing of a parent line).

For vegetatively propagated varieties: in the case of a sample size of 40 plants, the maximum number of off-types allowed would be 2.

3. Unless otherwise indicated, all observations on the leaves should be made on fully developed leaves, on the 3rd or 4th leaf from the base (i.e. when the flower head is about 3 cm in diameter).
4. Unless otherwise indicated all observations on the outer bract of the flower head should be made on the 5th whorl of bracts from the base of the central flower head.
5. Unless otherwise indicated, all observations on inner bracts of the flower head must be made on the central flower head.

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: incisions (10 to 12 leaf stage) (characteristic 9)
- (b) Central flower head: shape in longitudinal section (characteristic 26)
- (c) Central flower head: time of appearance (characteristic 28)
- (d) Outer bract: color (external side) (characteristic 41)

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 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. Plant: height (* (+) including central flower head)	Plante: hauteur (capitule central inclus)	Pflanze: Höhe (einschließlich Hauptblütenkopf)	Planta: altura (incluyendo el capítulo central)		
short	courte	niedrig	corta	Violet de Provence, Tudela	3
medium	moyenne	mittel	media	Blanc Hyerois, Camus de Bretagne, Vertu	5
tall	haute	hoch	alta	Caribou, Popvert, Salambo	7
2. Plant: number of lateral shoots on main stem	Plante: nombre de ramifications sur la tige principale	Pflanze: Anzahl Seitentriebe am Haupttrieb	Planta: número de ramificaciones en el tallo principal		
few	faible	gering	bajo	Blanc Hyerois, Calico, Popvert	3
medium	moyen	mittel	medio	Salambo	5
many	élevé	groß	alto	Chrysanthème, Vertu	7
3. Main stem: height (* (+) excluding central flower head)	Tige principale: hauteur (à l'exclusion du capitule central)	Haupttrieb: Höhe (ohne Hauptblütenkopf)	Planta: altura (excluyendo el capítulo central)		
short	basse	niedrig	baja	Capitan	3
medium	moyenne	mittel	media	Castel, Salambo	5
tall	haute	hoch	alta	Caribou	7
4. Main stem: distance (* (+) between central flower head and youngest well developed leaf)	Tige principale: distance entre le capitule central et la feuille bien développée la plus jeune	Haupttrieb: Abstand zwischen Hauptblütenkopf und jüngstem gut entwickeltem Blatt	Tallo principal: distancia entre el capítulo central y la hoja bien desarrollada y más joven		
short	courte	gering	corta	Caribou, Violet de Provence	3
medium	moyenne	mittel	media	Blanc Hyerois, Tudela	5
long	longue	groß	larga	Castel	7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5. Main stem: diameter (at about 10 cm below central flower head)	Tige principale: diamètre (à 10 cm environ sous la base du capitule central)	Haupttrieb: Durchmesser (ungefähr 10 cm unter dem Hauptblütenkopf)	Tallo principal: diámetro (aproximadamente a 10 cm por debajo del capítulo central)		
small	petit	klein	pequeño	Violet de Provence	3
medium	moyen	mittel	medio	Castel, Vertu	5
large	grand	groß	grande	Carène	7
6. Leaf: attitude (* (10 to 12 leaf stage))	Feuille: port (stade 10 à 12 feuilles)	Blatt: Stellung (10- bis 12- Blattstadium)	Hoja: porte (estado de 10 a 12 hojas)		
erect	dressé	aufrecht	erecto	Capitan, Pètre, Vert de Provence	1
semi-erect	demi-dressé	halbaufrecht	semierecto	Calico, Camus de Bretagne	3
horizontal	horizontal	waagrecht	horizontal	Blanc Hyerois, Popvert	5
7. Leaf: long spines (*)	Feuille: longues épinés	Blatt: lange Stacheln	Hoja: espinas largas		
absent	absentes	fehlend	ausentes	Camus de Bretagne, Tudela	1
present	présentes	vorhanden	presentes	Spinoso sardo	9
8. Leaf: length	Feuille: longueur	Blatt: Länge	Hoja: longitud		
short	courte	kurz	corta	Tudela, Violet de Provence	3
medium	moyenne	mittel	media	Blanc Hyerois, Chrysanthème, Popvert	5
long	longue	lang	larga	Camus de Bretagne, Caribou	7
9. Leaf: incisions (* (10 to 12 leaf stage))	Feuille: incisions (stade 10 à 12 feuilles)	Blatt: Randeinschnitte (10- bis 12- Blattstadium)	Hoja: incisiones (estado de 10 a 12 hojas)		
absent	absentes	fehlend	ausentes	Tudela, Violet de Provence	1
present	présentes	vorhanden	presentes	Camus de Bretagne, Vertu	9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10. Leaf: number of lobes	Feuille: nombre de lobes	Blatt: Anzahl Lappen	Hoja: número de lóbulos		
few	faible	gering	bajo	Violet de Provence, Tudela	3
medium	moyen	mittel	medio	Blanc Hyerois, Chrysanthème	5
many	élevé	groß	alto	Salanquet	7
11. Leaf: length of longest lobe	Feuille: longueur du lobe le plus long	Blatt: Länge des längsten Lappens	Hoja: longitud del lóbulo más largo		
short	court	kurz	corto	Vertu	3
medium	moyen	mittel	medio	Orlando, Popvert, Sybaris	5
long	long	lang	largo		7
12. Leaf: width of longest lobe	Feuille: largeur du lobe le plus long	Blatt: Breite des längsten Lappens	Hoja: anchura del lóbulo más largo		
narrow	étroit	schmal	estrecho	Vertu	3
medium	moyen	mittel	medio	Orlando, Popvert, Sybaris	5
broad	large	breit	ancho		7
13. Lobe: shape of tip (excluding terminal lobe) (+)	Lobe: forme de l'extrémité (à l'exclusion du lobe terminal)	Lappen: Form der Spitze (ohne Endlappen)	Lóbulo: forma de la punta (excluyendo el lóbulo terminal)		
acute	aiguë	spitz	aguda	Camus de Bretagne, Vertu	1
nearly right angle	approximativement à angle droit	fast rechteckig	casi en ángulo recto	Calico, Caribou, Salambo	2
obtuse	obtuse	stumpf	obtusa		3
14. Lobe: number of secondary lobes (+)	Lobe: nombre de divisions	Lappen: Anzahl Sekundärlappen	Lóbulo: número de lóbulos secundarios		
none or very few	nul ou très faible	fehlend oder sehr gering	ninguno o muy bajo	Violet de Provence	1
few	faible	gering	bajo	Camus de Bretagne	3
medium	moyen	mittel	medio	Blanc Hyerois, Popvert	5
many	élevé	groß	alto	Orlando, Sybaris	7
very many	très élevé	sehr groß	muy alto		9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15. Lobe: shape of tip of secondary lobes (+)	Lobe: forme de l'extrémité des divisions	Lappen: Form der Spitze des Sekundärlappens	Lóbulo: forma de la punta de los lóbulos secundarios		
acuminate	très pointue	zugespitzt	acuminada	Vert de Provence	1
acute	pointue	spitz	aguda	Blanc Hyerois, Tudela	2
rounded	arrondie	abgerundet	redondeada	Cric, Popvert	3
16. Leaf blade: shape in cross section	Limbe: forme en section transversale	Blattspreite: Form im Querschnitt	Limbo: forma de la sección transversal		
flat	plate	flach	plana	Salambo, Vertu	1
V shaped	en V	V-förmig	en forma de V	Capitan, Castel	2
17. Leaf blade: intensity of green color (upper side)	Limbe: intensité de la couleur verte (face supérieure)	Blattspreite: Intensität der Grünfärbung (Oberseite)	Limbo: intensidad del color verde (del haz)		
light	claire	hell	claro	Blanc Hyerois, Pètre	3
medium	moyenne	mittel	medio	Violet de Provence, Tudela, Vertu	5
dark	foncée	dunkel	oscuro	Camus de Bretagne, Cric	7
18. Leaf blade: hue of green color (*)	Limbe: teinte de la couleur verte	Blattspreite: Ton der Grünfärbung	Limbo: tonalidad del color verde		
absent	absente	fehlend	ausente	Salambo	1
yellowish	jaunâtre	gelblich	amarillento	Blanc Hyerois	2
greyish	grisâtre	gräulich	grisáceo	Camus de Bretagne	3
19. Leaf blade: intensity of grey hue	Limbe: intensité de la teinte grise	Blattspreite: Intensität des Grautons	Limbo: intensidad de la tonalidad gris		
weak	faible	gering	débil		3
medium	moyenne	mittel	media		5
strong	forte	stark	fuerte		7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20. Leaf: hairiness on upper side (*)	Limbe: pilosité de la face supérieure	Blattspreite: Behaarung der Oberseite	Limbo: velloso del haz		
absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Camus de Bretagne, Castel, Vert Globe	1
weak	faible	gering	débil	Vertu	3
medium	moyenne	mittel	media	Carène, Popvert	5
strong	forte	stark	fuerte	Violet de Provence	7
very strong	très forte	sehr stark	muy fuerte		9
21. Leaf blade: blistering (*)	Limbe: cloûre	Blattspreite: Blasigkeit	Limbo: abullonado		
absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil		1
weak	faible	gering	débil	Blanc Hyerois, Popvert	3
medium	moyenne	mittel	medio	Calico, Caribou	5
strong	forte	stark	fuerte	Chrysanthème	7
very strong	très forte	sehr stark	muy fuerte	Cric	9
22. Petiole: anthocyanin coloration at base	Pétiole: pigmentation anthocyanique de la base	Blattstiel: Anthocyanfärbung an der Basis	Pecíolo: pigmentación antociánica de la base		
absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Capitan, Carène	1
weak	faible	gering	débil	Castel	3
medium	moyenne	mittel	media	Pètre	5
strong	forte	stark	fuerte	Violet de Provence	7
very strong	très forte	sehr stark	muy fuerte		9
23. Central flower head: length	Capitule central: longueur	Hauptblütenkopf: Länge	Capítulo central: longitud		
short	court	kurz	corto	Pètre	3
medium	moyen	mittel	medio		5
long	long	lang	largo	Vert de Provence	7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
24. Central flower head: diameter	Capitule central: diamètre	Hauptblütenkopf: Durchmesser	Capítulo central: diámetro		
small	petit	klein	pequeño	Vert de Provence	3
medium	moyen	mittel	medio		5
large	grand	groß	grande	Camus de Bretagne, Salambo	7
25. Central flower head: size (*)	Capitule central: taille	Hauptblütenkopf: Größe	Capítulo central: tamaño		
small	petite	klein	pequeño	Vert de Provence, Violet de Provence	3
medium	moyenne	mittel	mediano	Blanc Hyerois, Chrysanthème	5
large	grande	groß	grande	Castel, Salambo	7
26. Central flower head: shape in (+) longitudinal section (*)	Capitule central: forme en section longitudinale	Hauptblütenkopf: Form im Längsschnitt	Capítulo central: forma de la sección longitudinal		
circular	circulaire	kreisförmig	redonda	Castel, Green Globe	1
broad elliptic	elliptique large	rechteckig	elíptica ancha	Chrysanthème, Vert de Provence	2
ovate	ovale	eiförmig	oval	Cric, Salambo	3
triangular	triangulaire	dreieckig	triangular	Tudela, Violet de Provence	4
transverse broad elliptic	elliptique transversale large	quer breit elliptisch	elíptica transversal ancha	Carène, Pètre	5
27. Central flower head: shape of tip (*)	Capitule central: forme au sommet	Mittlerer Blütenkopf: Form der Spitze	Capítulo central: forma de la punta		
acute	pointue	spitz	aguda	Violet de Provence	1
rounded	arrondie	abgerundet	redondeada	Camus de Bretagne	2
flat	aplatie	flach	plana	Chrysanthème	3
depressed	creuse	eingesunken	hundida	Carène, Pètre	4
28. Central flower head: time of appearance (*)	Capitule central: époque d'apparition	Mittlerer Blütenkopf: Zeitpunkt des Erscheinens	Capítulo central: época de aparición		
early	précoce	früh	precoz	Chrysanthème, Tudela	3
medium	moyenne	mittel	media	Blanc Hyerois	5
late	tardive	spät	tardía	Camus de Bretagne	7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
29. Central flower head: time of beginning of opening	Capitule central: période du début de l'ouverture	Mittlerer Blütenkopf: Zeitpunkt des Beginns des Öffnens	Capítulo central: época de apertura		
early	précoce	früh	precoz	Chrysanthème, Vert de Provence	3
medium	moyenne	mittel	media	Camus de Bretagne	5
late	tardive	spät	tardía	Popvert, Tudela	7
30. First flower head on lateral shoot: length	Premier capitule latéral: longueur	Erster seitlicher Blütenkopf: Länge	Primer capítulo lateral: longitud		
short	court	kurz	corto	Pètre, Popvert	3
medium	moyen	mittel	medio		5
long	long	lang	largo	Vert de Provence	7
31. First flower head on lateral shoot: diameter	Premier capitule latéral: diamètre	Erster seitlicher Blütenkopf: Durchmesser	Primer capítulo lateral: diámetro		
small	petit	klein	pequeño	Vert de Provence	3
medium	moyen	mittel	medio	Blanc Hyerois	5
large	grand	groß	grande	Salambo	7
32. First flower head on lateral shoot: size	Premier capitule latéral: taille	Erster seitlicher Blütenkopf: Größe	Primer capítulo lateral: tamaño		
small	petite	klein	pequeño	Violet de Provence	3
medium	moyenne	mittel	medio	Chrysanthème	5
large	grande	groß	grande	Blanc Hyerois, Castel	7
33. First flower head on lateral shoot: shape in longitudinal section (+)	Premier capitule latéral: forme en section longitudinale	Erster seitlicher Blütenkopf: Form im Längsschnitt	Primer capítulo lateral: forma de la sección longitudinal		
circular	circulaire	kreisförmig	circular	Castel, Salambo	1
broad elliptic	elliptique large	rechteckig	elíptica ancha	Cric, Blanc Hyerois	2
ovate	ovale	eiförmig	oval	Velours	3
triangular	triangulaire	dreieckig	triangular	Violet de Provence	4
transverse broad elliptic	elliptique transversale large	quer breit elliptisch	elíptica transversal ancha	Pètre, Popvert	5

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
34. First flower head on lateral shoot: degree of opening	Premier capitule latéral: degré de l'ouverture	Erster seitlicher Blütenkopf: Stärke der Öffnung	Primer capítulo lateral: grado de apertura		
weak	faible	gering	débil	Salambo	3
medium	moyen	mittel	media	Blanc Hyerois	5
strong	fort	stark	fuerte	Chrysanthème	7
35. Outer bract: length of base (+)	Bractée externe: longueur de la base	Äußeres Deckblatt: Länge der Basis	Bráctea exterior: longitud en la base		
short	courte	kurz	corta		3
medium	moyenne	mittel	media		5
long	longue	lang	larga		7
36. Outer bract: width of base (+)	Bractée externe: largeur de la base	Äußeres Deckblatt: Breite der Basis	Bráctea exterior: anchura en la base		
narrow	étroite	schmal	estrecha	Orlando	3
medium	moyenne	mittel	media	Blanc Hyerois, Popvert, Vertu	5
broad	large	breit	ancha	Pètre	7
37. Outer bract: thickness at base (+)	Bractée externe: épaisseur de la base	Äußeres Deckblatt: Dicke an der Basis	Bráctea exterior: espesor en la base		
thin	fine	dünn	delgada		3
medium	moyenne	mittel	media	Blanc Hyerois, Popvert, Vertu	5
thick	épaisse	dick	gruesa	Pètre	7
38. Outer bract: main shape (*)	Bractée externe: forme principale	Äußeres Deckblatt: Hauptform	Bráctea exterior: forma principal		
broader than long	plus large que longue	breiter als lang	más ancha que larga	Calico, Cric Pètre	1
as broad as long	aussi large que longue	ebenso breit wie lang	tan ancha como larga	Camus de Bretagne, Pètre	2
longer than broad	plus longue que large	länger als breit	más larga que ancha	Vert de Provence, Vertu	3

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
39. Outer bract: shape of apex (*)	Bractée externe: forme de l'apex	Äußeres Deckblatt: Form der Spitze	Bráctea exterior: forma del ápice		
acute	pointu	spitz	agudo	Spinoso Sardo	1
flat	plat	flach	plano	Talpiot	2
emarginate	échancré	eingekerbt	emarginado	Chrysanthème	3
40. Outer bract: depth of emargination (*)	Bractée externe: profondeur de l'échancrure	Äußeres Deckblatt: Tiefe des Randeinschnittes	Bráctea exterior: profundidad del emarginado		
shallow	faible	flach	poco profunda	Castel, Violet de Provence	3
medium	moyenne	mittel	media	Blanc Hyerois	5
deep	profonde	tief	profunda	Chrysanthème	7
41. Outer bract: color (external side) (*)	Bractée externe: couleur (face externe)	Äußeres Deckblatt: Farbe der Außenseite	Bráctea exterior: color (cara externa)		
green	verte	grün	verde	Blanc Hyerois, Tudela, Vert de Provence	1
green striped with violet	verte striée de violet	grün gestreift mit violett	verde rayado con violeta	Violet de Provence	2
violet striped with green	violette striée de vert	violett gestreift mit grün	violeta rayado con verde	Chrysanthème	3
mainly violet	principalement violette	überwiegend violett	principalmente violeta	Cric, Salambo	4
entirely violet	entièrement violette	vollständig violett	completamente violeta	Velours	5
42. Outer bract: hue of secondary color (as 41) (*)	Bractée externe: teinte secondaire (comme 41)	Äußeres Deckblatt: Ton der Sekundärfarbe der Außenseite (wie unter 41)	Bráctea exterior: tonalidad del color secundario (como para 41)		
absent	absente	fehlend	ausente	Calico	1
bronze	bronze	bronzefarben	bronce	Blanc Hyerois, Sakiz	2
grey	grise	grau	gris	Camus de Bretagne, Popvert	3
43. Outer bract: reflexing of tip (+)	Bractée externe: courbure au sommet	Äußeres Deckblatt: Biegung der Spitze	Bráctea exterior: curvatura de la punta		
absent	absente	fehlend	ausente	Castel, Salambo	1
present	présente	vorhanden	presente	Calice, Chrysanthème	9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
44. Outer bract: size of spine (*)	Bractée externe: taille de l'épine	Äußeres Deckblatt: Größe des Stachels	Bráctea exterior: tamaño de las espinas		
absent or very small	absente à très petite	fehlend oder sehr klein	ausentes o muy pequeñas	Calico	1
small	petite	klein	pequeñas	Chrysanthème, Vertu	3
medium	moyenne	mittel	medias	Violet de Provence	5
large	grande	groß	grandes		7
very large	très grande	sehr groß	muy grandes	Spinoso Sardo	9
45. Outer bract: mucron (+)	Bractée externe: mucron	Äußeres Deckblatt: aufgesetzte Spitze	Bráctea exterior: mucrón		
absent	absent	fehlend	ausente	Chrysanthème, Pètre	1
present	présent	vorhanden	presente	Camus de Bretagne	9
46. Central flower head: anthocyanin coloration of inner bracts	Capitule central: coloration anthocyanique des bractées internes	Hauptblütenkopf: Anthocyanfärbung der inneren Deckblätter	Capítulo central: pigmentación antocianica de las brácteas internas		
absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Popvert	1
weak	faible	gering	débil	Catsel	3
medium	moyenne	mittel	media	Blanc Hyerois	5
strong	forte	stark	fuerte	Chrysanthème	7
very strong	très forte	sehr stark	muy fuerte	Salambo	9
47. Central flower head: density of inner bracts (+)	Capitule central: densité des bractées internes	Hauptblütenkopf: Dichte der inneren Deckblätter	Capítulo central: densidad de las brácteas internas		
sparse	lâche	locker	laxa	Camard, Calice	3
medium	moyenne	mittel	media	Camus de Bretagne	5
dense	dense	dicht	densa	Cacique, Compact	7
48. Receptacle: diameter (+)	Réceptacle: diamètre	Blütenboden: Durchmesser	Receptáculo: diámetro		
small	petit	klein	pequeño	Violet de Provence	3
medium	moyen	mittel	medio	Camus de Bretagne	5
large	grand	groß	grande	Capitan, Salambo	7

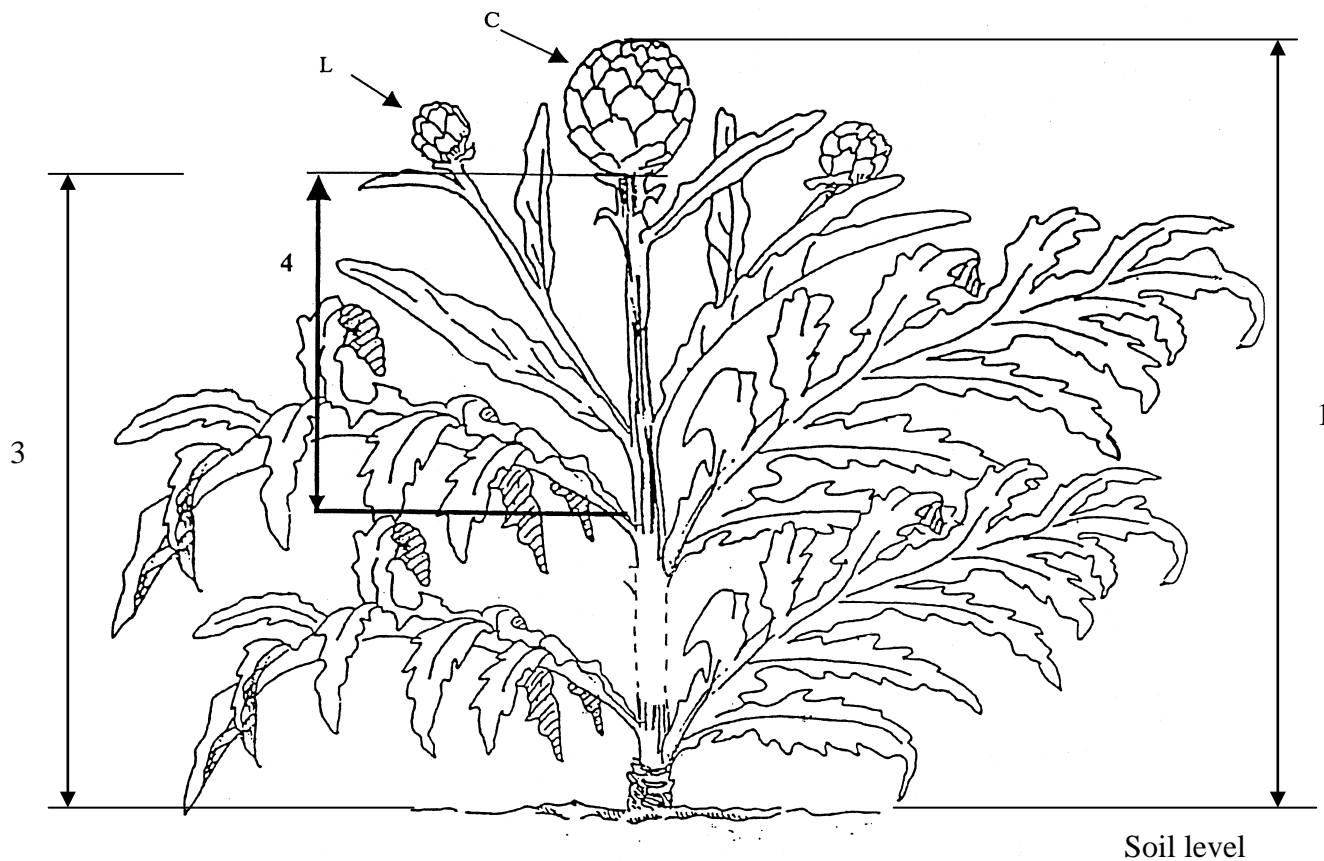
English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
49. Receptacle: thickness (+)	Réceptacle: épaisseur	Blütenboden: Dicke	Receptáculo: espesor		
thin	fin	dünn	delgado	Blanc Hyerois, Tudela	3
medium	moyen	mittel	medio	Pètre	5
thick	épais	dick	grueso	Camus de Bretagne, Castel	7
50. Receptacle: shape in longitudinal section (+)	Réceptacle: forme en section longitudinale	Blütenboden: Form im Längsschnitt	Receptáculo: forma de la sección longitudinal		
flat	plate	flach	plana	Carène	1
slightly depressed	légèrement creuse	leicht eingesenkt	ligeramente deprimida	Camus de Bretagne, Salambo	2
strongly depressed	fortement creuse	stark eingesenkt	muy deprimida	Blanc Hyerois, Chrysanthème	3
51. Tendency to produce lateral shoots at base	Tendance à produire des tiges latérales à la base	Neigung zur Bildung von Seitentrieben an der Basis	Tendencia a producir ramas laterales en la base		
weak	faible	gering	débil	Blanc Hyerois, Castel, Vertu	3
medium	moyenne	mittel	media	Violet de Provence, Chrysanthème, Popvert	5
strong	forte	stark	fuerte	Cacique, Calico	7

VIII. Explanation on the Table of Characteristics

Ad. 1, 3, 4: Plant: height (including central flower head) (1);

Main stem: height (excluding central flower head) (3);

Main stem: distance between flower head and last developed leaf (4)



C: Central flower head

L: First flower head on lateral

Ad. 13: Lobe: shape of tip (excluding terminal lobe)

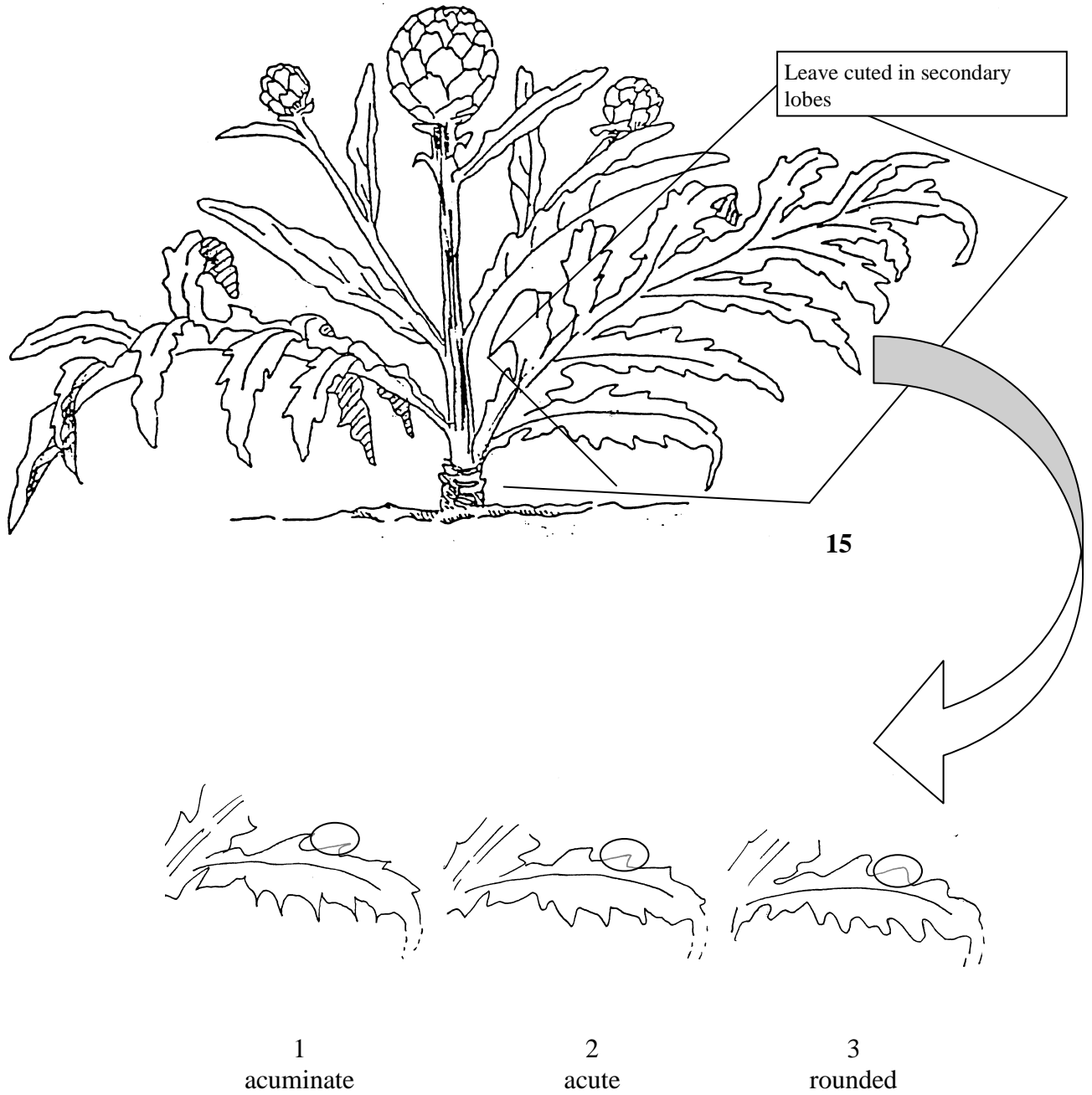


1
acute

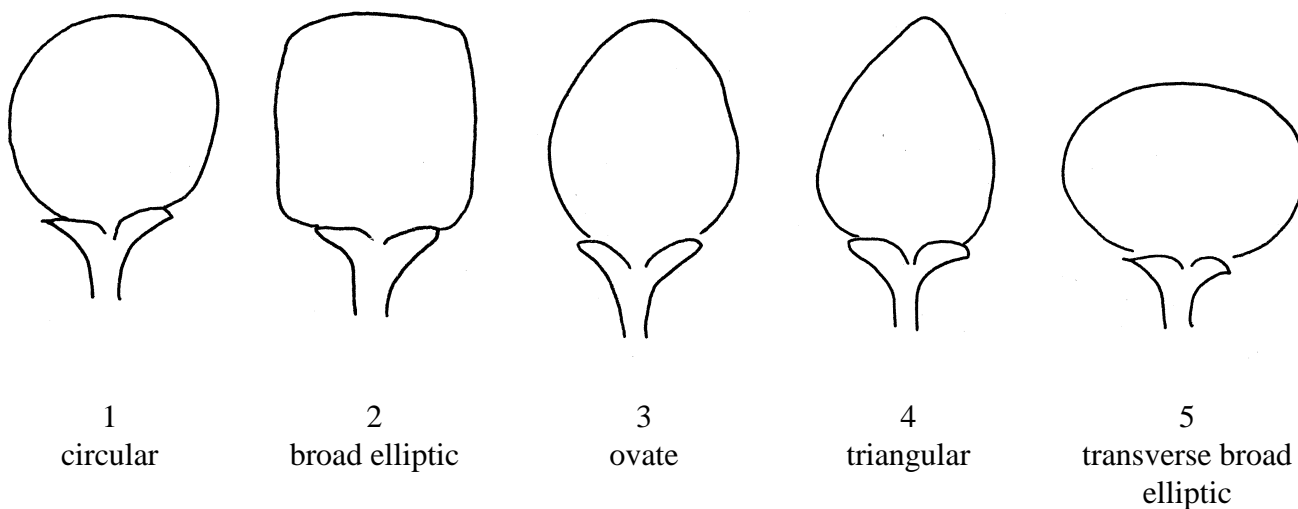
2
nearly right angle

3
obtuse

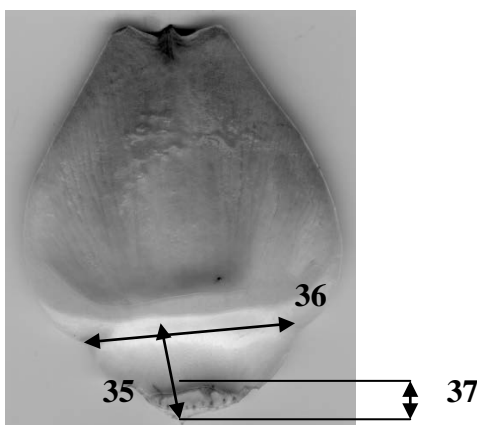
Ad. 14, 15: Lobe: number (14) and shape of tip (15) of secondary lobes (on the 3rd – 4th whorl of leaves)



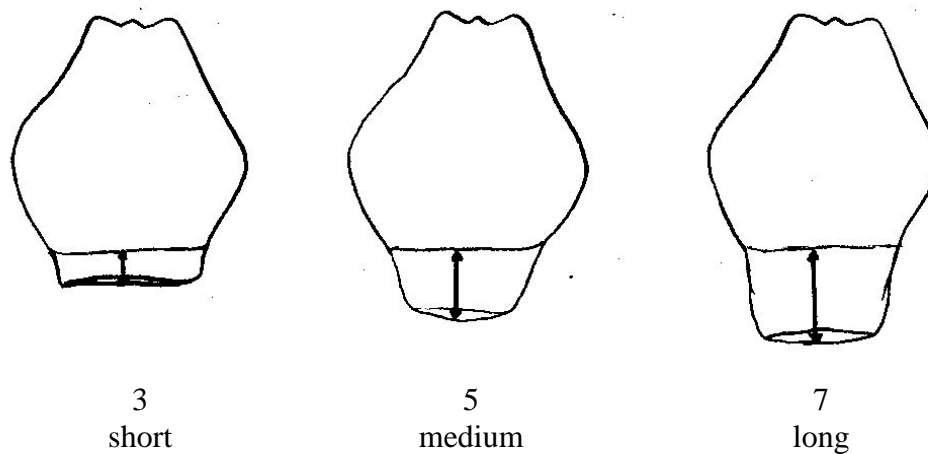
Ad. 26, 33: Central flower head (26) and First flower head on lateral shoot (33): shape in longitudinal section



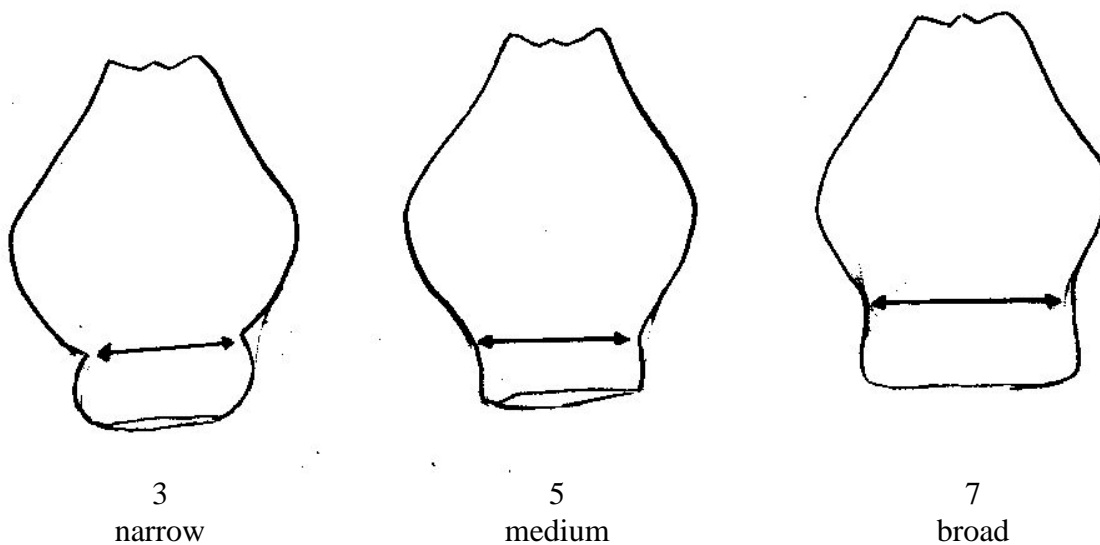
Ad. 35, 36, 37: Outer bracts: length of base (35), width of base (36), thickness at base (37)



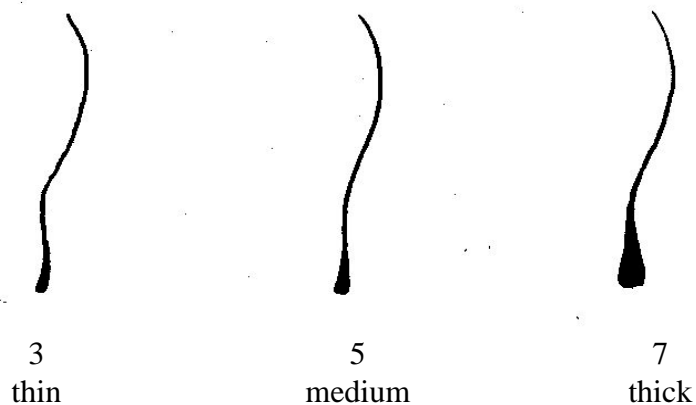
Ad. 35: Outer bract : length of base



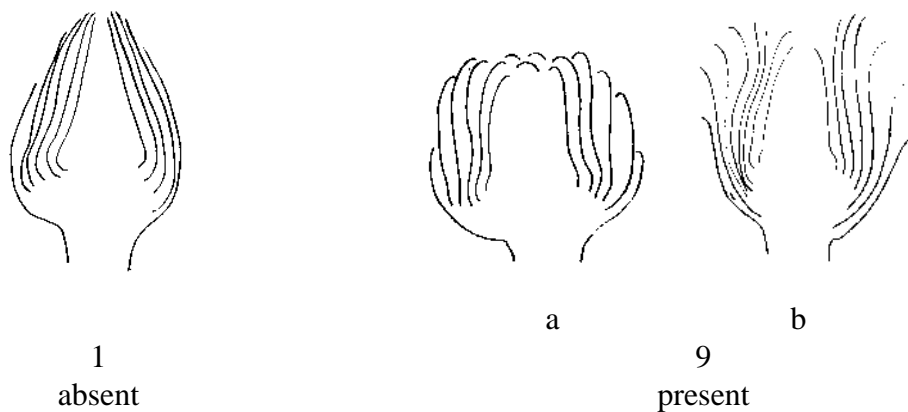
Ad. 36: Outer bract : width of base



Ad. 37: Outer bract : thickness at base (*bract in profile*)



Ad. 43: Outer bract: reflexing at tip

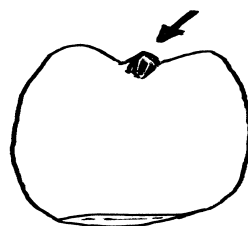


a: reflexing at tip (on Chrysanthème)
b: reflexing at tip (on Calice)

Ad. 45: Outer bract: mucron

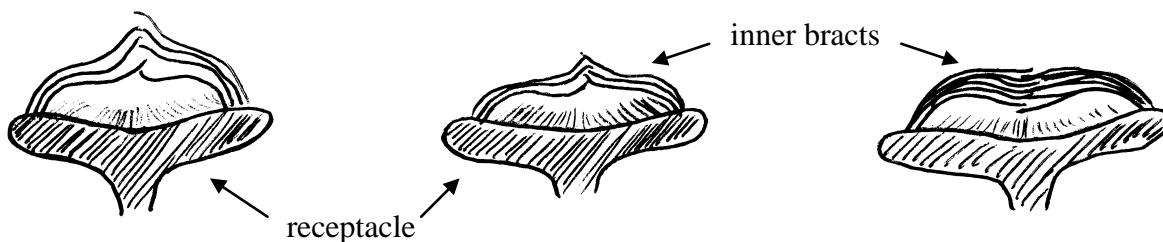


1
absent



9
present

Ad. 47: Central flower head: density of inner bracts

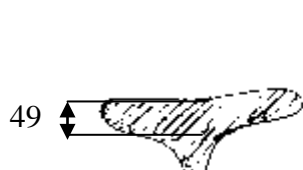


3
sparse

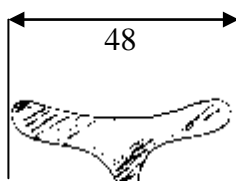
5
medium

7
dense

Ad. 48, 49, 50: Receptacle: diameter (48), thickness (49), shape in longitudinal section (50)



50
1
flat



2
slightly depressed



3
strongly depressed

IX. Literature

Baznizky J. and Zohary D. 1994: Breeding of seed-planted artichoke, *Plant Breeding Reviews* 12: 253-267.

Foury C. 1967: Étude de la biologie florale de l'artichaut (*Cynara scolymus* L.); Application à la sélection. 1^{ère} partie: données sur la biologie florale, *Ann. Amélior. Plantes* 17 (4): 357-373.

Foury C. 1969: Étude de la biologie florale de l'artichaut (*Cynara scolymus* L.); Application à la sélection. 2^{ème} partie: étude des descendances obtenues en fécondation contrôlée, *Ann. Amélior. Plantes* 19 (1): 23-52.

Foury C. et Aubert S. 1977: Observations préliminaires sur la présence et la répartition de pigments anthocyaniques dans un mutant d'artichaut (*Cynara scolymus* L.) à fleurs blanches, *Ann. Amélior. Plantes* 27 (5): 603-612.

Foury C. 1978: Quelques aspects de l'histoire des variétés d'artichaut (*Cynara scolymus* L.), *Journal d'agric. traditionnelle et de botanique appliquée*, XXV (1) janvier-mars 1978.

Foury C. 1979: Quelques aspects pratiques de la sélection généalogique de l'artichaut, 1-Présentation, création de lignées, *Ann. Amélior. Plantes* 29 (4): 383-418.

Foury C. 1989: Ressources génétiques et diversification de l'artichaut (*Cynara scolymus* L.), *Acta Horticulturae* 242: 155-166.

Pécaut P. and Martin F. 1993: Variation occurring after natural and in vitro multiplication of early Mediterranean cultivars of globe artichoke *Cynara scolymus* L. *Agronomie* 13: 909-919.

Zohary D. and Basnizky J. 1975: The cultivated artichoke – *Cynara scolymus* L. Its probable wild Ancestors. *Economic Botany* 29: 233-235.

X. Technical Questionnaire

		Reference Number (not to be filled in by the applicant)
TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights		
1.	Species	<i>Cynara scolymus</i> L. / <i>Cynara cardunculus</i> var. <i>scolymus</i> L. GLOBE ARTICHOKE
2.	Applicant (Name and address)	
3.	Proposed denomination or breeder's reference	
4.	Information on origin, maintenance and reproduction of the variety	
4.1	Method of maintenance and reproduction	
	(a) Vegetative propagation	[]
	(b) Seed propagation	[]
	- Hybrid.....	[]
	- Open pollinated	[]
	(c) Other (specify)	[]
4.2	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).

Characteristics	Example Varieties	Note
5.1 Leaf: incisions (10 to 12 leaf stage) (9)		
absent	Tudela, Violet de Provence	1[]
present	Camus de Bretagne, Vertu	9[]
5.2 Central flower head: shape in longitudinal section (26)		
circular	Castel, Green Globe	1[]
broad elliptic	Chrysanthème, Vert de Provence	2[]
ovate	Cric, Salambo	3[]
triangular	Tudela, Violet de Provence	4[]
transverse broad elliptic	Carène, Pètre	5[]
5.3 Central flower head: shape of tip (27)		
acute	Violet de Provence	1[]
rounded	Camus de Bretagne	2[]
flat	Chrysanthème	3[]
depressed	Carène, Pètre	4[]
5.4 Central flower head: time of appearance (28)		
early	Chrysanthème, Tudela	3[]
medium	Blanc Hyérois	5[]
late	Camus de Bretagne	7[]
5.5 Outer bract: color (external side) (41)		
green	Blanc Hyerois, Tudela, Vert de Provence	1[]
green striped with violet	Violet de Provence	2[]
violet striped with green	Chrysanthème	3[]
mainly violet	Cric, Salambo	4[]
entirely violet	Velours	5[]

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 Main use

(a) Fresh market

- large flower head []
- small flower head []

(b) Canning

- receptacle []
- bottom []
- pickling artichoke []

(c) Industrial use

- leaf extraction []
- biomass []

(d) Other (please specify) []

.....

7.2 Resistance to pests and diseases

7.3 Special conditions for the examination of the variety

7.4 Other information

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]