



TG/105/4

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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

CHINESE CABBAGE

*(Brassica rapa L. var.
pekinensis (Lour.) Kitam.)*

*

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names:*

<i>Latin</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Brassica rapa L. var. pekinensis</i> (Lour.) Kitam.	Chinese Cabbage	Chou chinois	Chinakohl	Repollo chino
<i>Brassica pekinensis</i> (Lour.) Rupr.				
<i>Brassica rapa L. ssp. pekinensis</i> (Lour.) Olsson				
<i>Brassica campestris L. ssp.</i> <i>pekinensis</i> (Lour.) Olsson				

ASSOCIATED DOCUMENTS

These guidelines should be read in conjunction with document TG/1/3, “General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants” (hereinafter referred to as the “General Introduction”) and its associated “TGP” documents.

* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Brassica rapa* L. var. *pekinensis* (Lour.) Kitam. (= *Brassica pekinensis* (Lour.) Rupr., *Brassica rapa* L. ssp. *pekinensis* (Lour.) Olsson, or *Brassica campestris* L. ssp. *pekinensis* (Lour.) Olsson) and varieties of hybrids between that species and *Brassica rapa* L. where the latter varieties are similar to those of *Brassica rapa* L. var. *pekinensis* (Lour.) Kitam.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of seed.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

20 g or 5,000 seeds.

2.4 The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should be stated by the applicant

2.5 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.6 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 *Duration of Tests*

The minimum duration of tests should normally be two independent growing cycles.

3.2 *Testing Place*

The tests should normally be conducted at one place. If any characteristics of the variety, which are relevant for the examination of DUS, cannot be seen at that place, the variety may be tested at an additional place.

3.3 *Conditions for Conducting the Examination*

The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.

3.4 *Test Design*

3.4.1 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.4.2 Each test should be designed to result in a total of at least 60 plants which should be divided between two or more replicates.

3.5 *Number of Plants / Parts of Plants to be Examined*

Unless otherwise indicated, all observations determined by measuring or counting should be made on 20 plants or parts taken from each of 20 plants.

3.6 *Additional Tests*

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 *Distinctness*

4.1.1 *General Recommendations*

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 *Consistent Differences*

The minimum duration of tests recommended in section 3.1 reflects, in general, the need to ensure that any differences in a characteristic are sufficiently consistent.

4.1.3 *Clear Differences*

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.2 *Uniformity*

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.2.2 The assessment of uniformity for single cross hybrid varieties should be made on the basis of the number of off-types. A population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 60 plants, 2 off-types are allowed.

4.2.3 For the assessment of uniformity of other seed-propagated varieties, the recommendations in the General Introduction for cross-pollinated varieties should be followed, as appropriate.

4.3 *Stability*

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new seed or plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

4.3.3 The stability of a hybrid variety may, in addition to an examination of the hybrid variety itself, also be assessed by examination of the uniformity and stability of its parent lines.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness is aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Head: shape in longitudinal section (characteristic 24);
- (b) Head: type (characteristic 25);
- (c) Time of harvest maturity (characteristic 33).

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

6. Introduction to the Table of Characteristics

6.1 *Categories of Characteristics*

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 *States of Expression and Corresponding Notes*

States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.3 *Types of Expression*

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 *Example Varieties*

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 *Legend*

(*) Asterisked characteristic – see Section 6.1.2

(a)-(b) See Explanations on the Table of Characteristics in Chapter 8, Section 8.1

(+) See Explanations on the Table of Characteristics in Chapter 8, Section 8.2

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

English	français	deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. (a) Plant: habit (at the beginning of head formation) (+)	Plante: port (au début de la formation de la pomme)	Pflanze: Wuchsform (zu Beginn der Kopfbildung)	Planta: porte (al comienzo de la formación del cogollo)		
erect	dressée	aufrecht	erecto	Osiris	1
semi-erect	demi dressée	halbaufrecht	semierecto	Muso, Spectrum	2
spreading	étalé	breitwüchsig	rastrero	Bando	3
2. (a) Plant: height (*)	Plante: hauteur	Pflanze: Höhe	Planta: altura		
short	courte	niedrig	corta	Regina	3
medium	moyenne	mittel	media	Muso	5
tall	haute	hoch	alta	Shousai	7
3. (b) Outer leaf: length	Feuille externe: longueur	Umblatt: Länge	Hoja externa: altura		
short	courte	kurz	corta	Salad	3
medium	moyenne	mittel	media	Muso	5
long	longue	lang	alta	Shousai	7
4. (b) Outer leaf: maximum width	Feuille externe: largeur maximale	Umblatt: maximale Breite	Hoja externa: anchura máxima		
narrow	étroite	schmal	estrecha	Salad	3
medium	moyenne	mittel	media	Muso	5
broad	large	breit	ancha	Bando	7

English	français	deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5. (b) Outer leaf: shape (* (+)	Feuille externe: forme (avant la maturité de récolte)	Umblatt (vor der Erntereife)	Hoja externa: forma (antes de la madurez para la cosecha)		
circular	circulaire	rund	circular	Kenshin	1
broad obovate	obovale large	breit verkehrt eiförmig	oboval ancha	Kaho	2
obovate	obovale	verkehrt eiförmig	oboval	Muso	3
narrow obovate	obovale étroite	schmal verkehrt eiförmig	oboval estrecha	Bando	4
narrow elliptic	elliptique étroite	schmal elliptisch	elíptica estrecha	Shousai	5
6. (b) Outer leaf: apex (+)	Feuille externe: apex	Umblatt: Spitze	Hoja externa: ápice		
obtuse	obtus	stumpf	obtuso	Shousai	1
rounded	arrondi	abgerundet	redondeado	Muso	2
truncated	tronqué	abgestumpft	truncado	Ousho	3
7. (b) Outer leaf: (* (+)	Feuille externe: nombre de cloûres sur la face supérieure	Umblatt: Anzahl von Blasen auf der Oberseite	Hoja externa: número de vesículas del haz		
few	petit	gering	bajo	Kinap, Sprinter	3
medium	moyen	mittel	medio	Hopkin, Muso	5
many	grand	groß	alto	Bando, Ming	7
8. (b) Outer leaf: size of (* (+)	Feuille externe: taille des cloûres sur la face supérieure	Umblatt: Größe der Blasen auf der Oberseite	Hoja externa: tamaño de las vesículas del haz		
small	petites	klein	pequeñas	Granat	3
medium	moyennes	mittel	medianas	Regina	5
large	grandes	groß	grandes		7

English	français	deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
9. (b) Outer leaf: color (*)	Feuille externe: couleur	Umblatt: Farbe	Hoja externa: color		
yellow green	vert jaune	gelbgrün	verde amarillento	Regina	1
green	vert	grün	verde	Hayamidori, Kaho, Muso	2
grey green	gris vert	graugrün	verde-gris		3
10. (b) <u>Varieties with green outer leaves:</u> only: Intensity of green color	<u>Seulement variétés avec des feuilles externes vertes:</u> Feuille externe: intensité de la couleur verte	<u>Nur Sorten mit grünen Umblättern:</u> Intensität der Grünfärbung	<u>Sólo variedades dehojas externas verdes:</u> Hoja externa: intensidad del color verde		
light	claire	hell	claro	Kaho	3
medium	moyenne	mittel	medio	Muso	5
dark	foncée	dunkel	oscuro	Hayamidori	7
11. (b) Outer leaf: anthocyanin coloration	Feuille externe: pigmentation anthocyanique	Umblatt: Anthocyanfärbung	Hoja externa: pigmentación antocianica		
absent	absente	fehlend	ausente	Muso	1
present	présente	vorhanden	presente	Harumaki 1 go	9
12. (b) Outer leaf: glossiness	Feuille externe: brillance	Umblatt: Glanz	Hoja externa: brillo		
weak	faible	gering	débil	Kaho, Kinap	3
medium	moyenne	mittel	medio	Hopkin, Muso	5
strong	forte	stark	fuerte	Shunjyu	7
13. (b) Outer leaf: hairiness (at lower side)	Feuille externe: pilosité (sur la face inférieure)	Umblatt: Behaarung (an der Unterseite)	Hoja externa: pubescencia (en el envés)		
absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Salad	1
weak	faible	gering	débil	Cream, Kinap	3
medium	moyenne	mittel	media	Shunjyu, Tardisto	5
strong	forte	stark	fuerte	Muso	7
very strong	très forte	sehr stark	muy fuerte		9

English	français	deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
14. (b) Outer leaf: profile in longitudinal section (excluding leaf base)	Feuille externe: profil en section longitudinale (sans la base de la feuille)	Umblatt: Profil im Längsschnitt (ohne Blattbasis)	Hoja externa: perfil en sección longitudinal (excluida la base de la hoja)		
concave	concave	konkav	cóncavo	Hopkin	1
straight	droit	gerade	recto	Tardisto	2
convex	convexe	konvex	convexo	Chiko	3
15. (b) Outer Leaf: undulation of margin	Feuille externe: ondulation du bord	Umblatt: Randwellung	Hoja externa: ondulación del margen		
weak	faible	gering	débil	Kaho, Sixtyres	3
medium	moyenne	mittel	media	Spectrum	5
strong	forte	stark	fuerte	Chiko, Shin-azuma	7
16. (b) Outer leaf: incisions of margin (at distal part)	Feuille externe: découpure du bord (à la partie distale)	Umblatt: Randeinschnitte (am distalen Teil)	Hoja externa: incisiones del margen (en la parte distal)		
absent	absente	fehlend	ausentes	Kenshin	1
intermediate	moyenne	intermediär	intermedias	Kasumi, Regina	2
strong	forte	stark	fuertes	Muso	3
17. (b) Outer leaf: serration of margin (at base)	Feuille externe: échancrure du bord (à la base)	Umblatt: Randsägung (an der Basis)	Hoja externa: serrado del margen (en la base)		
weak	faible	gering	débil	Kinap	3
medium	moyenne	mittel	medio	Tardisto	5
strong	forte	stark	fuerte		7
18. (b) Outer leaf: midrib in cross section (at mid-point)	Feuille externe: section transversale de la nervure (au milieu)	Umblatt: Mittelrippe im Querschnitt (in der Mitte)	Hoja externa: nervio central en sección transversal (en el punto medio)		
concave	concave	konkav	cóncavo	Regina	1
flat	plate	flach	plano	Kinap	2

English	français	deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
19. (b) Outer leaf: length of midrib (+)	Feuille externe: longueur de la nervure	Umblatt: Länge der Mittelrippe	Hoja externa: longitud del nervio central		
short	courte	kurz	corto	Hamamidori	3
medium	moyenne	mittel	medio	Muso	5
long	longue	lang	largo	Shosai	7
20. (b) Outer leaf: width of midrib (at base)	Feuille externe: largeur de la nervure (à la base)	Umblatt: Breite der Mittelrippe (an der Basis)	Hoja externa: anchura del nervio central (en la base)		
narrow	étroite	schmal	estrecho	Shousai	3
medium	moyenne	mittel	medio	Jade Pagoda	5
broad	large	breit	ancho	Harumaki 1 go	7
21. (b) Outer leaf: color of midrib	Feuille externe: couleur de la nervure	Umblatt: Farbe der Mittelrippe	Hoja externa: color del nervio central		
white	blanc	weiß	blanco	Muso	1
light green	vert clair	hellgrün	verde claro		2
green	vert	grün	verde		3
22. (a) Head: height	Pomme: hauteur	Kopf: Höhe	Cogollo: altura		
short	courte	niedrig	corto	Senda	3
medium	moyenne	mittel	medio	Jade Pagoda, Muso	5
tall	longue	hoch	largo	Monument, Shousai	7
23. (a) Head: maximum width	Pomme: largeur maximale	Kopf: maximale Breite	Cogollo: anchura máxima		
narrow	étroite	schmal	estrecho	Granat	3
medium	moyenne	mittel	medio	Jade Pagoda, Muso	5
broad	large	breit	ancho		7

English	français	deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
24. (a) Head: shape in longitudinal section (*) (+)	Pomme: forme en section longitudinale	Kopf: Form im Längsschnitt	Cogollo: forma en sección longitudinal		
circular	circulaire	rund	circular	Kenshin	1
elliptic	elliptique	elliptisch	elíptica	Hayamidori	2
ovate	ovale	eiförmig	oval	Shinjyu	3
obovate	obovale	verkehrt eiförmig	oboval	Hamamidori	4
oblong	oblongue	rechteckig	oblonga	Chushu	5
narrow oblong	oblongue étroite	schmal rechteckig	oblonga estrecha	Shousai	6
25. (a) Head: type (*)	Pomme: type	Kopf: Typ	Cogollo: tipo		
open	ouverte	offen	abierta	Monument	1
half-open	demi ouverte	halboffen	semiabierta	Spectrum	2
closed	fermée	geschlossen	cerrada	Kinap, Muso	3
26. (a) Closed head variety only: Head: degree of overlapping leaf (*)	Variété avec pomme fermée seulement: Pomme: importance de la couverture des feuilles	Nur Sorten mit geschlossenem Kopf: Kopf: Ausmaß des überlappenden Blattes	Sólo variedades con cogollo cerrado: Cogollo: grado de solapado de las hojas		
low	faible	gering	bajo	Shousai	3
medium	moyenne	mittel	medio	Shinjyu	5
high	élevée	stark	alto	Kaho	7
27. (a) Head: color of top	Pomme: couleur du sommet	Kopf: Farbe des oberen Teils	Cogollo: color de la parte superior		
white	blanc	weiß	blanco		1
yellow	jaune	gelb	amarillo		2
yellow green	vert jaune	gelbgrün	verde amarillento	Kasumi	3
green	vert	grün	verde	Bando, Muso, Salad	4

English	français	deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
28. (*) (a) Varieties with green top only: Head: intensity of green color	Variétés avec un sommet vert seulement: Pomme: intensité de la couleur verte	Nur Sorten mit grünem oberen Teil: Kopf: Intensität der Grünfärbung	Sólo variedades con parte superior verde: Cogollo: intensidad del color verde		
light	claire	hell	claro	Salad	3
medium	moyenne	mittel	medio	Muso	5
dark	foncée	dunkel	oscuro	Bando	7
29. (*) (a) Head: blistering of wrapper leaf	Pomme: cloûre des feuilles de couverture	Kopf: Blasigkeit des Deckblattes	Cogollo: abullonado de la hoja envolvente		
absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil		1
weak	faible	gering	débil	Granat	3
medium	moyenne	mittel	medio	Regina	5
strong	forte	stark	fuerte		7
very strong	très forte	sehr stark	muy fuerte		9
30. (*) (a) Head: internal color	Pomme: couleur interne	Kopf: Innenfarbe	Cogollo: color de la parte interna		
whitish	blanchâtre	weißlich	blanquecino		1
yellow	jaune	gelb	amarillo	Muso	2
orange	orange	orange	naranja	Orange Queen	3
31. (*) (a) Head: firmness (at harvest maturity)	Pomme: fermeté (à maturité de récolte)	Kopf: Festigkeit (bei Erntereife)	Cogollo: firmeza (en el momento de la madurez para la cosecha)		
very loose	très molle	sehr locker	muy blando		1
loose	molle	locker	blando	Granat	3
medium	moyenne	mittel	medio	Sixtyress	5
firm	ferme	fest	firme	Bando, Regina	7
very firm	très faible	sehr fest	muy firme	Shunjyu	9

English	français	deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
32. (a) Head: apex of internal stem (at harvest maturity)	Pomme: apex de la tige interne (à maturité de récolte)	Kopf: Spitze des Innenstrunks (bei Erntereife)	Cogollo: ápice del tallo interno (en el momento de la madurez para la cosecha)		
pointed	pointu	spitz	puntiagudo	Kaho	1
round	arrondi	rund	redondeado	Muso	2
truncate	tronqué	stumpf	truncado	Syunju	3
33. (*) Time of harvest maturity	Époque de maturité de récolte	Zeitpunkt der Erntereife	Época de madurez para la cosecha		
very early	très précoce	sehr früh	muy temprana	Kenshin	1
early	précoce	früh	temprana	Regina, Sprinter	3
medium	moyenne	mittel	media	Muso, Nestor	5
late	tardive	spät	tardía	Chusyu, Granado	7
very late	très tardive	sehr spät	muy tardía	Treasure Island	9

8. Explanations on the Table of Characteristics

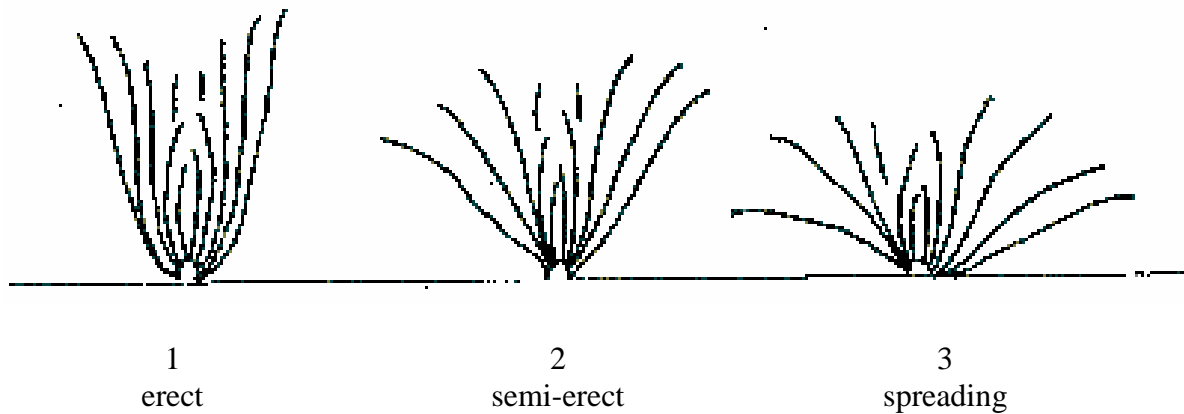
8.1 *Explanations covering several characteristics*

Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

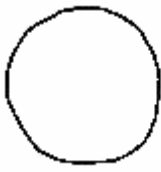
- (a) Plant, leaf and head: Observations on the plant, leaf and head should be made at harvest maturity.
- (b) Outer leaf: Observations on the outer leaf should be made on its upper outer side.

8.2 *Explanations for individual characteristics*

Ad. 1: Plant: habit (at the beginning of head formation)



Ad. 5: Outer leaf: shape (before harvest maturity)



1
circular



2
broad obovate



3
obovate



4
narrow obovate



5
narrow elliptic

Ad. 6: Outer leaf: apex



1
obtuse

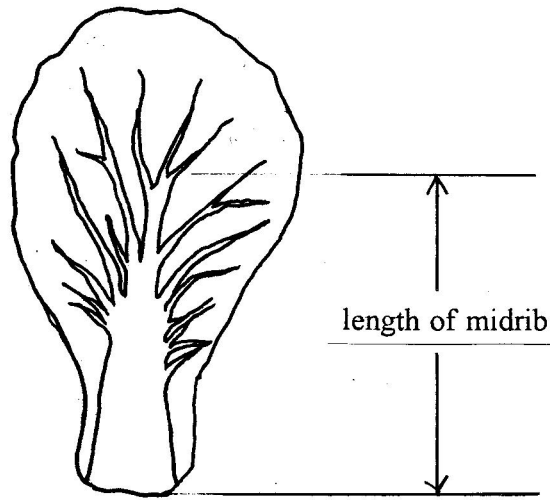


2
rounded

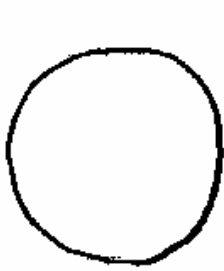


3
truncated

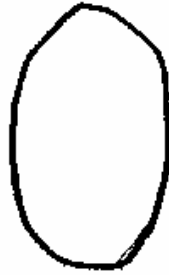
Ad 19: Outer leaf: length of midrib



Ad. 24: Head: shape in longitudinal section



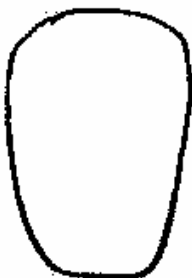
1
circular



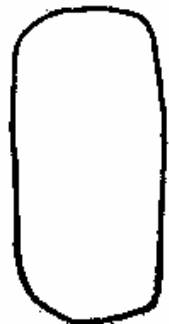
2
elliptic



3
ovate



4
obovate



5
oblong



6
narrow oblong

9. Literature

Shogakukan, 1991: "The Grand Dictionary of Horticulture, 3" 560-563.

Tsunoda, S., Hinata, K. and Gomez-Campo, C., 1980": "*Brassica*Crops and Wild Allies - Biology and Breeding," Japan Scientific Press, Tokyo.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
		Application date: (not to be filled in by the applicant)
TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights		
1. Subject of the Technical Questionnaire		
1.1 Latin Name	<i>Brassica rapa</i> L. var. <i>pekinensis</i> (Lour.) Kitam.	
1.2 Common Name	CHINESE CABBAGE	
2. Applicant		
Name	<input type="text"/>	
Address	<input type="text"/>	
Telephone No.	<input type="text"/>	
Fax No.	<input type="text"/>	
E-mail address	<input type="text"/>	
Breeder (if different from applicant)	<input type="text"/>	
3. Proposed denomination and breeder's reference		
Proposed denomination (if available)	<input type="text"/>	
Breeder's reference	<input type="text"/>	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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4. Information on the breeding scheme and propagation of the variety

4.1 Breeding Scheme

Variety resulting from:

4.1.1 Crossing

- (a) controlled cross []
(please state parent varieties)
- (b) partially unknown cross []
(please state known parent variety(ies))
- (c) totally unknown cross []

4.1.2 Mutation []
(please state parent variety)

4.1.3 Discovery []
(please state where, when and how developed)

4.1.4 Other []
(please provide details)

4.2 Method of Propagating the Variety

- (a) Cross-pollination
 - (i) population []
 - (ii) synthetic variety []
- (b) Hybrid []
(see below)
- (c) Other []
(please provide details)

In the case of hybrid varieties the production scheme for the hybrid should be provided on a separate sheet. This should provide details of all the lines required for propagating the hybrid, e.g.

Single Hybrid (SH)

(...female parent...) x (...male parent...)

Three-Way Hybrid (3WH)

(...female line...) x (...male line...)

=> single hybrid used as female parent x (...male parent...)

and should identify in particular:

- (a) any male sterile lines
- (b) maintenance system of male sterile lines.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:	
<p>5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).</p>			
Characteristics	Example Varieties	Note	
<p>5.1 Plant: height (2)</p>			
short	Regina	3[]	
medium	Muso	5[]	
tall	Shousai	7[]	
<p>5.2 Head: shape in longitudinal section (24)</p>			
circular	Kenshin	1[]	
elliptic	Hayamidori	2[]	
ovate	Shinjyu	3[]	
obovate	Hamamidori	4[]	
oblong	Chushu	5[]	
narrow oblong	Shousai	6[]	
<p>5.3 Head: type (25)</p>			
open	Monument	1[]	
half-open	Spectrum	2[]	
closed	Kinap, Muso	3[]	
<p>5.4 Time of harvest maturity (33)</p>			
very early	Kenshin	1[]	
early	Regina, Sprinter	3[]	
medium	Muso, Nestor	5[]	
late	Chusyu, Granado	7[]	
very late	Treasure Island	9[]	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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6. Similar varieties and differences from these varieties			
Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety
<i>(Example)</i>	<i>Head: shape in longitudinal section</i>	<i>circular</i>	<i>elliptic</i>

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
<p>7. Additional information which may help in the examination of the variety</p> <p>7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?</p> <p>Yes [] No []</p> <p>(If yes, please provide details)</p> <p>7.2 Special conditions for the examination of the variety</p> <p>7.2.1 Are there any special conditions for growing the variety or conducting the examination?</p> <p>Yes [] No []</p> <p>7.2.2 If yes, please give details:</p> <p>7.3 Other information</p>		
<p>8. Authorization for release</p> <p>(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?</p> <p>Yes [] No []</p> <p>(b) Has such authorization been obtained?</p> <p>Yes [] No []</p> <p>If the answer to (b) is yes, please attach a copy of the authorization.</p>		
<p>9. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:</p> <p>Applicant's name <input data-bbox="539 1794 1428 1854" type="text"/></p> <p>Signature <input data-bbox="422 1872 984 1933" type="text"/> Date <input data-bbox="1136 1872 1428 1933" type="text"/></p>		