

UPOV

TG/38/7

ORIGINAL: English

DATE: April 9, 2003

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

WHITE CLOVER

(Trifolium repens L.)

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>Trifolium repens L.</i>	White clover	Trèfle blanc	Weissklee	Trébol blanco

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.]

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1. SUBJECT OF THESE TEST GUIDELINES.....	3
2. MATERIAL REQUIRED	3
3. METHOD OF EXAMINATION.....	3
3.1 Duration of Tests.....	3
3.2 Testing Place	3
3.3 Conditions for Conducting the Examination.....	3
3.4 Test Design	4
3.5 Number of Plants / Parts of Plants to be Examined.....	4
3.6 Additional Tests	5
4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY	5
4.1 Distinctness	5
4.2 Uniformity.....	5
4.3 Stability	5
5. GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL	6
6. INTRODUCTION TO THE TABLE OF CHARACTERISTICS	6
6.1 Categories of Characteristics.....	6
6.2 States of Expression and Corresponding Notes.....	6
6.3 Types of Expression	7
6.4 Example Varieties	7
6.5 Legend.....	7
7. TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES.....	8
8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS	14
8.1 Explanations covering several characteristics	14
8.2 Explanations for individual characteristics	14
9. LITERATURE	17
10. TECHNICAL QUESTIONNAIRE.....	18

1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Trifolium repens* L.

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:

1.0 kg of seed.

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*

3.3.1 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.

3.3.2 Type of observation – visual or measurement

The recommended method of observing the characteristic is indicated by the following key in the second column of the Table of Characteristics:

- MG: single measurement of a group of plants or parts of plants
- MS: measurement of a number of individual plants or parts of plants
- VG: visual assessment by a single observation of a group of plants or parts of plants
- VS: visual assessment by observation of individual plants or parts of plants

3.3.3 Type of plot for observation

The recommended type of plot in which to observe the characteristic is indicated by the following key in the second column of the Table of Characteristics:

- A: spaced plants
- B: row plot
- C: special test

3.4 *Test Design*

3.4.1 General

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 Plot design

Each test should be designed to result in a total of at least 60 spaced plants and 10 meters of row plot.

Plots with spaced plants: Each test should consist of 60 spaced plants per variety arranged in 3, 4, 5 or 6 replicates, i.e. plots of 20, 15, 12 or 10 plants.

Row plots: Each test which includes row plots should consist of at least 10 meters of row arranged in two replicates, each of 5 meters. The density of sowing should be such that about 200 plants per meter should be obtained.

Where observations can be made in both spaced plants and row plots, it is likely that the expression of the characteristics will be different. Therefore, these different observations may not be interchangeable in the DUS examination.

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

3.5.1 Unless otherwise indicated, all observations determined by measuring or counting should be made on 60 plants or parts taken from each of 60 plants.

3.5.2 Observations on rows should be made on each row as a whole.

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 should be according to the recommendations for cross-pollinated varieties in the General Introduction.

4.2.3 For the assessment of uniformity of a variety, the standard deviation of the mean value for each characteristic should be compared with the mean of the standard deviations of comparable varieties using a recognized statistical technique.

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 assessed, either by growing a further generation, or by testing a new seed or plant stock, as appropriate, to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

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) Plant: prominence of white leaf marks (characteristic 5);
- (b) Leaf: size of median leaflet (characteristic 16).

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

QL Qualitative characteristic – see Section 6.3

QN Quantitative characteristic – see Section 6.3

PQ Pseudo-Qualitative characteristic – see Section 6.3

(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.

MG }
MS } Type of observation – see Section 3.3.2
VG }
VS }

A }
B } Type of plot for observation – see Section 3.3.3
C }

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: tendency to form inflorescences before vernalization	Plante: tendance à former des inflorescences avant la vernalisation	Pflanze: Neigung zur Bildung von Blütenständen vor der Vernalisation	Planta: tendencia a formar inflorescencias antes de la vernalización	
(+)	VS					
QN	absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Barbian	1
	weak	faible	gering	débil	Aran	3
	medium	moyenne	mittel	media	Milkanova	5
	strong	forte	stark	fuerte	Lune de Mai	7
	very strong	très forte	sehr stark	muy fuerte	Tivoli	9
2.	A - VS	Plant: intensity of green color	Plante: intensité de la couleur verte	Pflanze: Intensität der Grünfärbung	Planta: intensidad del color verde	
(+)	B - VG					
QN	light	claire	hell	claro	Avoca	3
	medium	moyenne	mittel	medio	Milkanova	5
	dark	foncée	dunkel	oscuro	Brindisi	7
3.	A - VS	Plant: density of foliage	Plante: densité du feuillage	Pflanze: Dichte des Laubes	Planta: densidad del follaje	
(+)	B - VG					
QN	low	faible	gering	baja	Makuri	3
	medium	moyenne	mittel	media	Barblanca	5
	high	élevée	hoch	alta	Grasslands Tahora	7
4.	C	Plant: proportion of plants with cyanid glucoside	Plante: proportion de plantes à glucosides cyanogènes	Pflanze: Anteil der Pflanzen mit Cyanglukosid	Planta: proporción de plantas con glucosidos cianogénicos	
(+)						
QN	absent or very low	absente ou très faible	fehlend oder sehr gering	ausente o muy baja	Pertina	1
	low	faible	gering	baja	Barbian	3
	medium	moyenne	mittel	media	Grasslands Tahora	5
	high	élevée	hoch	alta	Avoca	7
	very high	très élevée	sehr stark	muy alta	Grasslands Pitau	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5. A - VS	Plant: prominence of white leaf marks	Plante: proéminence des marques foliaires blanches	Pflanze: Ausprägung der weißen Blattzeichnung	Planta: prominencia de las marcas foliares blancas		
(*)						
(+) B - VG						
QN	absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Steinacher Weißklee	1
	weak	faible	gering	débil		3
	medium	moyenne	mittel	media	Asterix	5
	strong	forte	stark	fuerte		7
	very strong	très forte	sehr stark	muy fuerte	Haifa	9
6. A - MS	Plant: time of flowering	Plante: époque de floraison	Pflanze: Zeitpunkt der Blüte	Planta: época de la floración		
(*)						
(+) B - MG						
QN	very early	très précoce	sehr früh	muy precoz	Haifa	1
	early	précoce	früh	precoz	Chieftain	3
	medium	moyenne	mittel	media	Grasslands Huia	5
	late	tardive	spät	tardía	Tivoli	7
	very late	très tardive	sehr spät	muy tardía	Regal	9
7. A - MS	Plant: height	Plante: hauteur	Pflanze: Höhe	Planta: altura		
B - MG						
QN (a)	short	courte	niedrig	corta	Kent Wild White	3
	medium	moyenne	mittel	media	Pertina	5
	tall	longue	hoch	larga	Milkanova	7
8. A	Plant: width	Plante: largeur	Pflanze: Breite	Planta: anchura		
MS						
QN (a)	narrow	étroite	schmal	estrecha	Asterix	3
	medium	moyenne	mittel	media	Regal	5
	broad	large	breit	ancha	Aran	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
9.	A –VS	Plant: growth habit	Plante: port	Pflanze: Wuchsform	Planta: porte	
	B – VG					
QN	(a)	semi-erect	demi dressé	halbaufrecht	semierecto	3
		intermediate	moyen	mittel	intermedio	Makuri 5
		semi-postrate	demi étalé	halbliegend	semipostrado	Grasslands Tahora 7
10.	A	Stem: internode length of stolon	Tige: longueur de l'entrenœud du stolon	Stengel: Internodienlänge des Ausläufers	Tallo: longitud del entrenudo del estolón	
(+)	MS					
QN	(b)	short	court	kurz	corta	Grasslands Tahora 3
		medium	moyen	mittel	media	Aran 5
		long	long	lang	larga	Barblanca 7
11.	A	Stem: thickness of stolon	Tige: grosseur du stolon	Stengel: Dicke des Ausläufers	Tallo: grosor del estolón	
(+)	MS					
QN	(b)	very thin	très fin	sehr dünn	muy delgado	Kent Wild White 1
		thin	fin	dünn	delgado	Barbian 3
		medium	moyen	mittel	medio	Grasslands Huia 5
		thick	gros	dick	grueso	Kersey 7
		very thick	très gros	sehr dick	muy grueso	Aran 9
12.	A	Leaf: length of petiole	Feuille: longueur du pétiole	Blatt: Länge des Blattstiels	Hoja: longitud del pecíolo	
(+)	MS					
QN	(b)	short	court	kurz	corta	Asterix 3
		medium	moyen	mittel	media	Grasslands Huia 5
		long	long	lang	larga	Chieftain 7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota	
13.	A	Leaf: thickness of petiole	Feuille: grosseur du pétiole	Blatt: Dicke des Blattstiels	Hoja: grosor del pecíolo		
(+)	MS						
QN	(b)	very thin	très fin	sehr dünn	muy delgado	Kent Wild White	1
		thin	fin	dünn	delgado	Barbian	3
		medium	moyen	mittel	medio	Avoca	5
		thick	gros	dick	grueso	Milkanova	7
		very thick	très gros	sehr dick	muy grueso	Regal	9
14.	A	Leaf: length of median leaflet	Feuille: longueur de la foliole médiane	Blatt: Länge des mittleren Fiederblattes	Hoja: longitud del folíolo central		
(*)	MS						
(+)							
QN	(b)	very short	très courte	sehr kurz	muy corta	Kent Wild White	1
		short	courte	kurz	corta	Barbian	3
		medium	moyenne	mittel	media	Avoca	5
		long	longue	lang	larga	Grasslands Pitau	7
		very long	très longue	sehr lang	muy larga	Aran	9
15.	A	Leaf: width of median leaflet	Feuille: largeur de la foliole médiane	Blatt: Breite des mittleren Fiederblattes	Hoja: anchura del folíolo central		
(*)	MS						
(+)							
QN	(b)	very narrow	très étroite	sehr schmal	muy estrecha	Kent Wild White	1
		narrow	étroite	schmal	estrecha	Barbian	3
		medium	moyenne	mittel	media	Grasslands Huia	5
		broad	large	breit	ancha	Grasslands Pitau	7
		very broad	très large	sehr breit	muy ancha	Aran	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
16. (*) (+)	A MS	Leaf: size of median leaflet	Feuille: taille de la foliole médiane	Blatt: Größe des mittleren Fiederblattes	Hoja: tamaño del folíolo central	
QN	(b)	very small	très petite	sehr klein	muy pequeño	Kent Wild White 1
		small	petite	klein	pequeño	Rivendel 3
		medium	moyenne	mittel	medio	Pertina 5
		large	grande	groß	grande	Grasslands Pitau 7
		very large	très grande	sehr groß	muy grande	Aran 9
17. (*) (+)	A MS	Leaf: ratio of length to width of median leaflet	Feuille: rapport longueur/largeur de la foliole latérale	Blatt: Verhältnis Länge/Breite des mittleren Fiederblattes	Hoja: relación longitud/anchura del folíolo central	
QN		small	petit	klein	pequeño	Donna 3
		medium	moyen	mittel	medio	Barbian 5
		large	grand	groß	grande	Rivendel 7
18. (+)	A MS	Inflorescence: length of peduncle	Inflorescence: longueur du pédoncule	Blütenstand: Länge des Blütenstandsstiels	Inflorescencia: longitud del pedúnculo	
QN		short	court	kurz	corto	Kent Wild White 3
		medium	moyen	mittel	medio	Grasslands Huia 5
		long	long	lang	alto	Aran 7
19. (+)	A MS	Inflorescence: thickness of peduncle	Inflorescence: grosseur du pédoncule	Blütenstand: Dicke des Blütenstandsstiels	Inflorescencia: grosor del pedúnculo	
QN		thin	fin	dünn	delgado	Grasslands Demand 3
		medium	moyen	mittel	medio	Grasslands Pitau 5
		thick	gros	dick	grueso	Aran 7
20. (+)	A VS	Plant: number of inflorescences	Plante: nombre d'inflorescences	Pflanze: Anzahl Blütenstände	Planta: número de inflorescencias	
QN		few	peu nombreuses	wenige	pocas	Regal 3
		medium	moyennes	mittel	intermedias	Avoca 5
		many	nombreuses	viele	muchas	Milkanova 7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
21.	A	Inflorescence: diameter	Inflorescence: diamètre	Blütenstand: Durchmesser	Inflorescencia: diámetro		
(+)	VS						
QN		small	petit	klein	pequeño	Grasslands Demand	3
		medium	moyen	mittel	medio	Beaumont	5
		large	grand	groß	grande	Crusader	7

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) To be assessed on plants at the time of flowering (a variety is considered as flowering when 50% of the plants have flowered).
- (b) Stem and leaf: Observations on the stem and on the leaf should be made after all the plants of each variety in a replicate have flowered, and within 1-2 weeks after flowering. The longest healthily growing stolon should be selected from each plant for measurement.

8.2 *Explanations for individual characteristics*

Ad. 1: Plant: tendency to form inflorescences before vernalization

The observation should be made before the period of vernalization. The number of flower heads produced on each plant should be assessed and scored.

Ad. 2: Plant: intensity of green color

The observation should be made in the vegetative phase by examination and scoring of the overall green color of the plant.

Ad. 3: Plant: density of foliage

The observation should be made in the vegetative phase by examination and scoring of the overall ground cover of the foliage of the plant.

Ad. 4: Plant: proportion of plants with cyanid glucoside (HCN)

Preparation of picro-sodic paper (indicator paper):

1.0 g of picric acid is dissolved in 100 ml of distilled water.
(Heat is normally required.)

10 g of sodium carbonate is dissolved in 100 ml of distilled water.

When the picric acid solution has cooled, the sodium carbonate solution is added, mixed and stored in an amber reagent bottle.

Strips of Whatmann No. 1 filter paper are dipped in this solution and can be stored dry in a desiccator.

Test Procedure:

1. Healthy leaves (preferably folded) are selected from each of the sixty plants and put into separate eppendorf tubes (one trifoliate leaf per tube).
2. The tubes are closed and placed in a freezer at -18°C for a minimum of two hours.
3. After freezing, a strip of indicator paper is placed across the opening of the eppendorf tubes and the lid closed. This is sufficient to hold the paper in place.
4. The tubes are placed in darkness in a water bath at 50°C for two hours.
5. If there is HCN present the paper will change from yellow to red. The colour reaction is recorded as presence/absence of red colour for each of the sixty plants.

Ad. 5: Plant: prominence of white leaf marks

The observation should be made before flowering by examination and scoring of the plant as a whole. The presence of any type of white mark or the complete absence of marks is recorded.

Ad. 6: Plant: time of flowering

Observations should be made at least twice weekly.

(a) In single spaced plants the time of flowering for all plants in a variety is observed and the time of flowering of the variety is the time when 50% of the plants would have had three inflorescences per plant showing color.

(b) In row plots the time of flowering for all plants in a variety is observed and the time of flowering of the variety is the time when 80% of the plants would have been flowering.”

Ad. 10, 11: Stem: internode length (10) and thickness (11) of stolon

The internode length of the stolon should be measured between the third and fourth node counted from the growing tip.

The thickness (diameter) of the stolon should be measured at a point midway between the third and the fourth node counted from the growing tip.

Ad. 12, 13: Leaf: length (12), and thickness (13) of petiole

The petiole of the third expanded leaf, counted from the growing tip of the stolon, should be selected for measurement.

The length of the petiole should be measured from the base of the median trifoliate leaflet to the stolon.

The thickness should be measured at the widest point of the petiole.

Ad. 14, 15: Leaf: length (14) and width (15) of median leaflet

The median trifoliate leaflet of the third expanded leaf from the growing tip of the stolon should be selected for measurement of its length and width.

Ad. 16: Leaf: size of median leaflet

Calculated from the measurements of leaf length (14) x leaf width (15).

Ad. 17: Leaf: ratio of length to width of median leaflet

Calculated from the ratio of leaf length (14) ÷ leaf width (15).

Ad. 18, 19: : Inflorescence: length (18) and thickness (19) of peduncle

A mature inflorescence taken from close to center of the plant is selected for measurement of its peduncle length and peduncle thickness.

The length of the peduncle should be measured from the base of the inflorescence to the stolon.

The thickness of the peduncle should be measured at a point midway between the base of the inflorescence and the stolon.

Ad. 20: Plant: number of inflorescences

The number of inflorescences per plant is assessed on each of the 60 plants of a variety at maturity, normally 30 days after the mean date of flowering of the variety.

Ad. 21: Inflorescence: diameter

Time of assessment as for characteristic 20. The size of the inflorescences on the plant should be estimated on each of the 60 plants of the variety, on a 1-9 scale, on the plant taken as a whole

9. Literature

No specific literature.

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	<input type="text" value="Trifolium repens L."/>	
1.2 Common Name	<input type="text" value="White Clover"/>	
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:
-------------------------	-----------------	-------------------

4. Information on the breeding scheme and propagation of the variety

4.1 Breeding Scheme

4.2 Method of Propagating 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 note which best corresponds).

Characteristics	Example Varieties	Note
5.1 Plant: prominence of white leaf marks (5)		
absent or very weak	Steinacher Weißklee	1 []
weak		3 []
medium	Asterix	5 []
strong		7 []
very strong	Haifa	9 []

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
-------------------------	-----------------	-------------------

Characteristics	Example Varieties	Note
5.2 Plant: time of flowering (6)		
very early	Haifa	1 []
early	Chieftain	3 []
medium	Grasslands Huia	5 []
late	Tivoli	7 []
very late	Regal	9 []
5.3 Leaf: length of median leaflet (14)		
very short	Kent Wild White	1 []
short	Barbian	3 []
medium	Avoca	5 []
long	Grasslands Pitau	7 []
very long	Aran	9 []
5.4 Leaf: width of median leaflet (15)		
very narrow	Kent Wild White	1 []
narrow	Barbian	3 []
medium	Grasslands Huia	5 []
broad	Grasslands Pitau	7 []
very broad	Aran	9 []
5.5 Leaf: size of median leaflet (16)		
very small	Kent Wild White	1 []
small	Rivendel	3 []
medium	Pertina	5 []
large	Grasslands Pitau	7 []
very large	Aran	9 []

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
-------------------------	-----------------	-------------------

7. Additional information which may help in the examination of the variety

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?

Yes [] No []

(If yes, please provide details)

7.2 Special conditions for the examination of the variety

7.2.1 Are there any special conditions for growing the variety or conducting the examination?

Yes [] No []

7.2.2 If yes, please give details:

7.3 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 (b) is yes, please attach a copy of the authorization.

9. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant's name

Signature

Date