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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
 GENEVA

DRAFT

RASPBERRY

(*Rubus idaeus* L.)

*

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

AlternativeNames: *

<i>Latin</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Rubus idaeus</i> L.	Raspberry	Framboisier	Himbeere	Frambueso

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 GUI DELINES.....	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.....	4
4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY	4
4.1 Distinctness	4
4.2 Uniformity	4
4.3 Stability	5
5. GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL	5
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	6
6.4 Example Varieties	6
6.5 Legend	6
7. TABLE OF CHARACTERISTICS	7
8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS	20
8.1 Explanations covering several characteristics	20
8.2 Explanations for individual characteristics	20
9. LITERATURE.....	24
10. TECHNICAL QUESTIONNAIRE.....	25

1. SubjectoftheseGuidelines

These Test Guidelines apply to all varieties of *Rubus idaeus* L. and their hybrids as far as they are morphologically similar to *Rubus idaeus* L.

2. MaterialRequired

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 plants with good root formation and with a satisfactory number of adventitious buds on the roots.

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

10 plants.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease. The plants supplied should have good root formation, with a satisfactory number of adventitious buds on the roots. If they have been produced by *invitro* propagation this fact has to be stated by the applicant.

2.5 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. MethodofExamination

3.1 *DurationofTests*

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

3.2 *TestingPlace*

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 *ConditionsforConductingtheExamination*

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. In particular, it is essential that the plants produce a satisfactory crop of fruit in each of the two growing cycles.

3.4 *TestDesign*

3.4.1 Each test should be designed to result in a total of at least 10 plants.

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

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 10 plants or parts taken from each of 10 plants. In the case of fruit, a single typical fruit should be taken from each of the 10 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 or 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.

4.2.2 For the assessment of uniformity a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, 1 off-type is allowed.

4.3 Stability

4.3.1 In practice, it is usual to perform tests of stability that produce results ascertaining 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 plant stock 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 reproduced 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 trials so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Very young shoot: anthocyanin coloration of apex during rapid growth (characteristic 3);
- (b) Spines: presence (characteristic 12);
- (c) Fruit: color (characteristic 35);
- (d) Fruit: main bearing type (characteristic 39);
- (e) Varieties which fruit on previous year's cane in summer: Time of beginning of fruit ripening on previous year's canes (characteristic 44);

or

Varieties which fruit on current year's cane in autumn: Time of beginning of fruit ripening on current year's canes (characteristic 45).

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

6. IntroductiontotheTableofCharacteristics

6.1 *CategoriesofCharacteristics*

6.1.1 StandardTestGuidelinesCharacteristics

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 AsteriskedCharacteristics

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 *StatesofExpressionandCorrespondingNotes*

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 *TypesofExpression*

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

6.4 *ExampleVarieties*

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

6.5 *Legend*

(*) Asteriskedcharacteristic – see Section 6.1.2

QL Qualitativecharacteristic – see Section 6.3

QN Quantitativecharacteristic – see Section 6.3

PQ Pseudo-Qualitativecharacteristic – see Section 6.3

(a)-(f) 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. TableofCharacteristics/Tableaudescaractères/Merkmalstabelle/Tabladecaracteres

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplos	Note/ Nota
1.	Plant:habit	Plante:port	Pflanze:Wuchs	Planta:porte		
(+)						
PQ	upright	dressée	aufrecht	erecto	Ontario,Watson	1
	semi-upright	demi dressée	halbaufrecht	semierecto	AutumnBliss,Preußen, Schönemann	2
	arching	courbée	hängend	arqueado	JoanSquire,MallingJoy, Meeker	3
2. (*) (+)	Plant: number of current season's shoots	Plante: nombre de jeunes pousses	Pflanze: Anzahl diesjähriger Ruten	Planta: número de brotes de la estación encuso		
QN	few	petit	wenig	bajo	Rubaca,Rucami	3
	medium	moyen	mittel	medio	GlenAmple,Multirasca, Rumiloba	5
	many	grand	viele	alto	GlenClova,Skeena	7
	verymany	trèsgrand	sehrviele	muyalto	Sumner	9
3. (*)	(a) Veryyoungshoot: anthocyanin coloration of apex during rapid growth	Trèsjeune pousse: pigmentation anthocyanique de l'apex pendant la croissance rapide	Sehr junger Trieb: Anthocyanfärbung der Spitzewährend desschnellen Wachstums	Brotejoven: pigmentación antociánica del ápice durante el crecimiento rápido		
QL	absent	absente	fehlend	ausente	GelbeAntwerpener	1
	present	présente	vorhanden	presente	MallingPromise	9
4. (*)	(a) Veryyoungshoot: intensity of anthocyanin coloration of apex during rapid growth	Trèsjeune pousse: intensité de la pigmentation anthocyanique de l'apex pendant la croissance rapide	Sehr junger Trieb: Intensität der Anthocyanfärbung der Spitzewährend desschnellen Wachstums	Brotejoven: intensidad de la pigmentación antociánica del ápice durante el crecimiento rápido		
QN	weak	faible	gering	débil	Rumiloba,Rusilva	3
	medium	moyenne	mittel	media	Cola1,Rucam i,Veten	5
	strong	forte	stark	fuerte	MallingJoy,Rubaca	7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
5.	(b)	Currentseason's cane:bloom	Jeune canne:pruine	Diesjährige Rute: Bereifung	Rama de la estación en curso:pruina		
QN		absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Heritage, Willamette	1
		weak	faible	gering	ausente	Malling Promise, Zefa 2	3
		medium	moyenne	mittel	media	Malling Delight	5
		strong	forte	stark	fuerte	Glen Ample, September	7
		very strong	très forte	sehr stark	muy fuerte	Ontario	9
6.	(b)	Currentseason's cane:anthocyanin coloration	Jeune canne: pigmentation anthocyanique	Diesjährige Rute: Anthocyanfärbung	Rama de la estación en curso: pigmentación antociánica		
QN		absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Chiliwak, Golden Bliss	1
		weak	faible	gering	débil	Malling Leo, Tulameen	3
		medium	moyenne	mittel	media	Malling Orion	5
		strong	forte	stark	fuerte	Rode Radboud, Rubaca	7
7.	(b)	Currentseason's cane:length of internode	Jeune canne: longueur de l'entre-nœud	Diesjährige Rute: Internodienlänge	Rama de la estación en curso:longitud del entrenudo		
QN		short	court	kurz	corto	Zefa 3	3
		medium	moyen	mittel	medio	Rusilva, Zefa 2	5
		long	long	lang	largo	Caliber, Malling Joy	7
8.	(b)	Currentseason's cane:length of vegetative bud	Jeune canne: longueur de l'œil à bois	Diesjährige Rute: Längeder vegetativen Knospe	Rama de la estación en curso:longitud de la yema de madera		
(+)		short	court	kurz	corta	Wilcran	3
		medium	moyen	mittel	media	Veten	5
		long	long	lang	larga	Baronne de Wavre, Phyllis King	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
9. (*)	<u>Varieties which fruit on previous year's cane in summer: Dormant cane: length</u>	<u>Variétés dont la récolte est sur la canne de l'année précédente en été :</u> Cannedorm ante: longueur	<u>Sorten, die an der Vorjahresrute im Sommerfrüchten :</u> Winterrute:Länge	<u>Variedades que fructifican en verano en la rama de laño anterior :</u> Ramalatente: longitud		
QN	short	courte	kurz	corta	Loganlike	3
	medium	moyenne	mittel	media	Zefa2	5
	long	longue	lang	larga	Meeker,Schönemann	7
10. (b) (*)	<u>Varieties which fruit on previous year's cane in summer: Current season's cane: length</u>	<u>Variétés dont la récolte est sur la canne de l'année précédente en été :</u> Cannedel'année: longueur	<u>Sorten, die an der Jahresrute im Herbstfrüchten :</u> Jahresrute:Länge	<u>Variedades que fructifican en verano en la rama de laño anterior :</u> Ramadelaestación encurso:longitud		
QN	short	courte	kurz	corta	OrangeMarie	3
	medium	moyenne	mittel	media	Dinkum	5
	long	longue	lang	larga	Watson	7
11. (*) (+)	<u>Varieties which fruit on previous year's cane in summer: Dormant cane: color</u>	<u>Variétés dont la récolte est sur la canne de l'année précédente en été :</u> Cannedormante: couleur	<u>Sorten, die an der Vorjahresrute im Sommerfrüchten :</u> Winterrute:Farbe	<u>Variedades que fructifican en verano en la rama de laño anterior :</u> Ramalatente:color		
PQ	brownishgrey	grisbrunâtre	bräunlichgrau	grisparduzco	MallingLeo,Schönemann	1
	greyishbrown	brungrisâtre	graubraun	marróngrisáceo	MallingOrion	2
	brown	brun	braun	marrón	Caliber,GlenCova	3
	purplishbrown	brunpourpre	purpurbraun	marrónvioláceo	Festival, MallingLandmark	4
	brownishpurple	pourprebrunâtre	bräunlichpurpur	púrpuraparduzco	Royalty,Titan	5
12. (c) (*)	<u>Spines: presence</u>	<u>Épines: présence</u>	<u>Stacheln: Vorhandensein</u>	<u>Espinas: presencia</u>		
QL	absent	absentes	fehlend	ausentes	GlenMoy	1
	present	présentes	vorhanden	presentes	MallingPromise	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
13. (c) (*)	Varieties with spines present only: Spines: density	Variétés avec épines seulement: Épines: densité	Nur Sorten mit Stacheln: Stacheln: Dichte	Sólo variedades con espinas: Espinas: densidad		
QN	sparse	lâche	locker	escasa	MallingOrion,Rafzmach, Spica	3
	medium	moyenne	mittel	media	Multiraska,Zefa 2	5
	dense	dense	dicht	densa	AutumnBliss, Malling Exploit	7
14. (c)	Varieties with spines present only: Spines: size of base	Variétés avec épines seulement: Épines: taille de la base	Nur Sorten mit Stacheln: Stacheln: Größeder Basis	Sólo variedades con espinas: Espinas: tamaño de la base		
QN	verysmall	très petite	sehr klein	muy pequeña	Reveille	1
	small	petite	klein	pequeña	Pujallup,Resa	3
	medium	moyenne	mittel	media	Gevalo,MallingExploit	5
	large	grande	groß	grande	AutumnBliss, Köstliche Selita	7
	verylarge	très grande	sehr groß	muy grande	MallingLandmark, Matterhorn	9
15. (c)	Varieties with spines present only: Spines: length	Variétés avec épines seulement: Épines: longueur	Nur Sorten mit Stacheln: Stacheln: Länge	Sólo variedades con espinas: Espinas: longitud		
QN	short	courtes	kurz	cortas	Gigant,MallingDelight, Veten	3
	medium	moyennes	mittel	medias	MallingLeo	5
	long	longues	lang	largas	MallingExploit,Meeker	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
16. (c) <u>Varietieswith spinespresent only:Spines:color or colour</u>	<u>Variétésavec épines seulement: Épines: couleur</u>	<u>NurSortenmit Stacheln:Stacheln: Farbe</u>	<u>Sólovariedadescon espinas:Espinas: color</u>			
PQ	green	vert	grün	verde	GoldenBliss, MallingD elight	1
	brownishgreen	vertbrunâtre	bräunlichgrün	verde parduzco	MallingLandmark	2
	greenishbrown	brunverdâtre	grünlichbraun	marrón verdoso	RodeRadboud,Watson	3
	brown	brun	braun	marrón	MallingOrion,Spica	4
	purplishbrown	brunpourpre	purpurbraun	marrón violáceo	MallingLeo,Pujallup	5
	brownishpurple	pourprebrunâtre	bräunlichpurpur	púrpura parduzco	Resa,Tulameen	6
	purple	pourpre	purpur	púrpura	Sirius,Veten,Zefa3	7
17. (d) <u>Leaf:green color ofupperside</u> (*)	<u>Feuille:couleur vertedelaface supérieure</u>	<u>Blatt:Grünfärbung derOberseite</u>	<u>Hoja:color verde delaz</u>			
QN	light	légère	hell	claro	Watson,Skeena	3
	medium	moyenne	mittel	medio	MallingOrion	5
	dark	foncée	dunkel	oscuro	MallingLandmark,Resa, Rubaca	7
18. (d) <u>Leaf:predominant numberofleaflets</u> (*)	<u>Feuille:nombre prédominant de folioles</u>	<u>Blatt:vorwiegende Anzahl Fiederblätter</u>	<u>Hoja:número predominante de folíolos</u>			
PQ	three	trois	drei	tres	Veten, Zefa3	1
	equallythreeand five	parfoistrois,parfois cinq	gleichenteilsdreiund fünf	tantotrescomocinco	MallingExploit, Multiraska,Sirius	2
	five	cinq	fünf	cinco	Ontario,Pujallup,R usilva	3
19. (d) <u>Leaf:profileof leafletsincross section</u>	<u>Feuille:profil des foliolesensection transversale</u>	<u>Blatt:Profil der Fiederblättchenim Querschnitt</u>	<u>Hoja:perfil de los foliolosensección transversal</u>			
QN	concave	concaves	konkav	cónvexo	GlenClova,GlenMoy	1
	straight	droites	eben	plano	Gevalo	2
	convex	convexes	konvex	convexo	Gigant	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
20. (d) Leaf:rugosity (*)	Feuille:rugosité	Blatt:Runzeligkeit	Hoja:rugosidad			
QN	veryweak	trèsfaible	sehrgering	muydébil	Heritage,Watson	1
	weak	faible	gering	débil	Rusilva	3
	medium	moyenne	mittel	media	Caliber,Malling Landmark,Pujallup	5
	strong	forte	stark	fuerte	MallingExploit,Spica	7
	verystrong	trèsforte	sehrstark	muyfuerte	Korbfüller	9
21. (d) Leaf:relative positionoflateral leaflets (+)	Feuille:position relative des folioles latérales	Blatt:relative Stellung der seitlichen Fiederblättchen	Hoja:posición relativadodelos folioloslaterales			
QN	free	disjointes	freistehend	libres	Willamette	1
	touching	tangentes	einanderberührend	encontacto	MallingOrion	2
	overlapping	chevauchantes	überlappend	solapados	Gigant,Resa,Rumiloba	3
22. (d) Terminalleaflet: length	Folioleterminale: longueur	Endfieder:Länge	Folíolosuperior: longitud			
QN	short	courte	kurz	corto	Royalty	3
	medium	moyenne	mittel	medio	NorfolkGiant,Wilkran	5
	long	longue	lang	largo	MallingJoy	7
23.	Terminalleaflet: width	Folioleterminale: largeur	Endfieder:Breite	Folíolosuperior: anchura		
QN	narrow	étroite	schmal	estrecho	Rusilva	3
	medium	moyenne	mittel	medio	Zefa2	5
	broad	large	breit	ancho	GlenAmple	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
24.	Pedicel:numberof spines	Pédicelle:nombre d'épines	Blütenstiell:Anzahl Stacheln	Pedicelo:número de espinas		
QN	absent or very few	nul ou très petit	fehlend oder sehr gering	nulo o muy bajo	Glen Ample	1
	few	petit	gering	bajo	Multirasp, Pechts Gigant	3
	medium	moyen	mittel	medio	Glen Clova, Malling Leo	5
	many	grand	hoch	alto	Malling Jo y, Orange Marie	7
	very many	très grand	sehr hoch	muy alto	Ariadne, Golden Bliss	9
25. (*)	Peduncle:presence of anthocyanin coloration	Pédoncule:présence de pigmentation anthocyanique	Blütenstandstiell: Vorhandensein von Anthocyanfärbung	Pedúnculo: presencia de pigmentación antociánica		
QL	absent	absente	fehlend	ausente	Gelbe Antwerpener, Golden Bliss	1
	present	présente	vorhanden	presente	Willamette	9
26. (*)	Peduncle:intensity of anthocyanin coloration	Pédoncule:intensité de la pigmentation anthocyanique	Blütenstandstiell: Intensität der Anthocyanfärbung	Pedúnculo: intensidad de la pigmentación antociánica		
QN	very weak	très faible	sehr gering	muy débil	Julia, Rumilo	1
	weak	faible	gering	débil	Joan Squire, Malling Delight	3
	medium	moyenne	mittel	media	Gevalo, Pujallup	5
	strong	forte	stark	fuerte	Loganlike, Willamette	7
	very strong	très forte	sehr stark	muy fuerte	Rafzmach	9
27. (f)	Flower:size	Fleur:taille	Blüte:Größe	Flor:tamaño		
QN	small	petite	klein	pequeña	Ontario	3
	medium	moyenne	mittel	media	Rucami, Spica	5
	large	grande	groß	grande	Gevalo, Isabel	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
28. (f)	<u>Varieties which fruit on previous year's cane in summer:</u> Fruiting lateral attitude	<u>Variétés dont la récolte est sur la canne de l'année précédente en été :</u> Rameau fructifère: port	<u>Sorten, die an der Vorjahresrute im Sommerfrüchten :</u> Fruchtender Trieb: Haltung	<u>Variedades que fructifican en la rama del año anterior en verano :</u> Fructificación lateral: porte		
QN	erect	dressé	aufrecht	erecto	Malling Landmark, Ontario	1
	semi-erect	demi dressé	halbaufrecht	semierecto	Schönemann	2
	horizontal to drooping	horizontal à retombant	waagerecht bis hängend	horizontal acolgante	Rucami	3
29. (*) (f)	<u>Varieties which fruit on previous year's cane in summer:</u> Fruiting lateral length	<u>Variétés dont la récolte est sur la canne de l'année précédente en été :</u> Rameau fructifère: longueur	<u>Sorten, die an der Vorjahresrute im Sommerfrüchten :</u> Fruchtender Trieb: Länge	<u>Variedades que fructifican en la rama del año anterior en verano :</u> Fructificación lateral: longitud		
QN	very short	très court	sehr kurz	muy corta	Galante, Glen Moy	1
	short	court	kurz	corta	Multiraspia, Rafzmach	3
	medium	moyen	mittel	media	Gradina, Tulameen	5
	long	long	lang	larga	Meeker	7
	very long	très long	sehr lang	muy larga	Malling Joy, Malling Leo	9
30. (*) (e) (f)	Fruit: length	Fruit: longueur	Frucht: Länge	Fruto: longitud		
QN	short	court	kurz	corto	Malling Promise, Ontario	3
	medium	moyen	mittel	medio	Rafzmach	5
	long	long	lang	largo	Malling Delight	7
31. (*) (e) (f)	Fruit: width	Fruit: largeur	Frucht: Breite	Fruto: anchura		
QN	narrow	étroit	schmal	estrecho	Haida	3
	medium	moyen	mittel	medio	Meeker, Schönemann	5
	broad	large	breit	ancho	Glen Ample	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
32.	(e) Fruit:ratiolength/width (*) (f)	Fruit:rapport longueur/largeur	Frucht:Verhältnis Länge/Breite	Fruto:relación longitud/anchura		
QN	small	petit	klein	pequeña	Caliber,Zefa2	3
	medium	moyen	mittel	media	GlenClova,Rafzeter	5
	large	grand	groß	grande	MallingDelight,Tulameen	7
33.	(e) Fruit:general shapeinlateral view (*) (f) (+)	Fruit:forme généraleenvue latérale	Frucht:allgemeine Forminder Seitenansicht	Fruto:forma generalen perspectivalateral		
PQ	circular	circulaire	rund	circular	MallingLandmark, Ontario	1
	broadconical	conique large	breitkonisch	cónica ancha	MallingOrion,Meeker	2
	conical	conique	konisch	cónica	Annamaria,Rafzmach	3
	trapezoidal	trapézoïdal	trapezförmig	trapezoidal	Gradina	4
34.	(e) Fruit:sizeofsingle drupe (f)	Fruit:taille d'une drupesimple	Frucht:Größe der Einzelsteinfrucht	Fruto:tamaño de la drupa		
QN	small	petite	klein	pequeña	MallingAdmiral,Polana	3
	medium	moyenne	mittel	media	AutumnBliss, Malling Orion	5
	large	grande	groß	grande	Dinkum,Festival,Rafzeter	7
35.	(e) Fruit:color (*) (f)	Fruit:couleur	Frucht:Farbe	Fruto:color		
PQ	yellow	jaune	gelb	amarillo	GelbeAntwerpener, GoldenBliss	1
	orange	orange	orange	naranja	OrangeMarie	2
	lightred	rougeclair	hellrot	rojoclaro	MallingDelight	3
	mediumred	rougemoyen	mittelrot	rojomedio	GlenClova,Malling Orion	4
	darkred	rougefoncé	dunkelrot	rojooscuro	Gigant,Schönemann, Zefa2	5
	purple	pourpre	purpur	púrpura	Royalty	6
	darkpurple	pourprefoncé	dunkelpurpur	púrpura oscuro	DeepPurp le	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
36.	(e) Fruit:glossiness (f)	Fruit:brillance	Frucht:Glanz	Fruto:brillo		
QN	weak	faible	gering	débil	Gigant,Rumilo	3
	medium	moyenne	mittel	medio	Comox	5
	strong	forte	stark	fuerte	Rafzmach,Tulameen	7
	verystrong	trèsforte	sehrstark	muyfuerte	Resa	9
37.	(e) Fruit:firmness (*) (f)	Fruit:fermeté	Frucht:Festigkeit	Fruto:firmeza		
QN	verysoft	trèsmou	sehrweich	muyblando	Caliber,Malling Delight	1
	soft	mou	weich	blando	Gigant,Malling Landmark	3
	medium	moyen	mittel	medio	GlenClova, Malling Promise	5
	firm	ferme	fest	firme	Tulameen	7
	veryfirm	trèsferme	sehrfest	muyfirme	GlenProsen	9
38.	(e) Fruit:adherence (f) toplug	Fruit:adhérenceau réceptacle	Frucht:Haften am Zapfen	Fruto:adherenciaal receptáculo		
QN	veryweak	trèsfaible	sehrgering	muydébil	Nootka	1
	weak	faible	gering	débil	Rumilo,Zefa2	3
	medium	moyenne	mittel	media	GlenClova,Meeker	5
	strong	forte	stark	fuerte	MallingDelight	7
	verystrong	trèsforte	sehrstark	muyfuerte	MallingLandmark	9
39.	(e) Fruit:main bearingtype (*) (f)	Fruit:principaltypederécolte	Frucht:Haupternte	Fruto:principaltipodeproducción		
PQ	onlyonprevious year'scanein summer	seulementsurla cannedel'année précédenteenété	nurander Vorjahresrouteim Sommer	solamenteenlaramadel añoanteriores verano	MallingPromise	1
	bothonprevious year'scanein summerandon currentyear'scane inautumn	àlafoissurlacanne del'annéeprécedente enétéetsurlajeune canneenautomne	sowohl ander Vorjahresrouteim Sommersalsauchan derJahresrouteim Herbst	tantoenlaramadel añoanteriores veranocomoenlaramadel añoencurso enotoño	Isabel	2
	onlyoncurrent year'scanein autumn	seulementsurlajeune canneenautomne	nuranderJahresroute imHerbst	solamenteenlaramadel añoencursoen otoño	AutumnBliss	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
40. (*) (+)	Varieties which fruit on previous year's cane in summer: Plant: time of vegetative budburst	Variétés dont la récolte est sur la canne de l'année précédente en été: Plante: époque de débourrement	Sorten, die an der Vorjahresroute im Sommerfrüchten: Pflanze: Zeitpunkt des Auftreibens der vegetativen Knospe	Variedades que fructifican en la rama del año anterior en verano: Planta: época de aparición de la yema demadeira		
QN	early	précoce	früh	temprana	GlenMoy, Malling Promise	3
	medium	moyenne	mittel	media	Delmes, GlenClova	5
	late	tardive	spät	tardía	MallingOrion, Multiraspia	7
	very late	très tardive	sehr spät	muy tardía	MallingJoy	9
41. (*) (+)	Varieties which fruit on current year's cane in autumn: Time of cane emergence	Variétés dont la récolte est sur la jeune canne en automne: Début de la croissance de la canne	Sorten, die an der Jahresroute im Herbstfrüchten: Beginn des Triebwachstums	Variedades que fructifican en la rama del año en curso en otoño: Época de emergencia de la rama		
QN	early	précoce	früh	temprana	Polana	3
	medium	moyenne	mittel	media	AutumnBliss	5
	late	tardive	spät	tardía	Watson	7
42. (f) (*) (+)	Varieties which fruit on previous year's cane in summer: Time of beginning of flowering on previous year's cane	Variétés dont la récolte est sur la canne de l'année précédente en été: Époque du début de la floraison sur la canne de l'année précédente	Sorten, die an der Vorjahresroute im Sommerfrüchten: Zeitpunkt des Blühbeginns an der Vorjahresroute	Variedades que fructifican en la rama del año anterior en verano: Época de comienzo de la floración en la rama anterior		
QN	very early	très précoce	sehr früh	muy temprana	GlenMoy, Rafzmach	1
	early	précoce	früh	temprana	Gevalo, Willamette	3
	medium	moyenne	mittel	media	Rumiloba, Skeena	5
	late	tardive	spät	tardía	GlenProsen	7
	very late	très tardive	sehr spät	muy tardía	MallingJoy, MallingLeo	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
43. (f) <u>Varieties which fruit on current year's cane in autumn:</u> Time of beginning of flowering on current season's cane	<u>Variétés dont la récolte est sur la jeune canne en automne :</u> Époque du début de la floraison sur la jeune canne	<u>Sorten, die an der Jahresrute im Herbstfrüchten :</u> Zeitpunkt des Blühbeginns an der Jahresrute	<u>Variedades que fructifican en la rama del año en curso :</u> Época de comienzo de la floración en la rama del año en curso			
QN	very early	très précoce	sehr früh	muy temprana	Ariadne	1
	early	précoce	früh	temprana	Autumn Bliss	3
	medium	moyenne	mittel	media	Orange Marie	5
	late	tardive	spät	tardía	Watson	7
	very late	très tardive	sehr spät	muy tardía	September	9
44. (f) <u>Varieties which fruit on previous year's cane in summer:</u> Time of beginning of fruit ripening on previous year's cane	<u>Variétés dont la récolte est sur la canne de l'année précédente en été :</u> Epoque du début de la maturité des fruits sur la canne de l'année précédente	<u>Sorten, die an der Vorjahresrute im Sommerfrüchten :</u> Zeitpunkt des Beginns der Fruchtreife an der Vorjahresrute	<u>Variedades que fructifican en la rama del año anterior en verano :</u> Época de comienzo de madurez del fruto en la rama del año anterior			
QN	very early	très précoce	sehr früh	muy temprana	Vene	1
	early	précoce	früh	temprana	Glen Clova, Glen Moy, Rafzmach	3
	medium	moyenne	mittel	media	Rusilva, Willamette	5
	late	tardive	spät	tardía	Malling Landmark, Schönenmann	7
	very late	très tardive	sehr spät	muy tardía	Malling Leo	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplares	Note/ Nota
45 (f) (*) (+)	<u>Varieties which fruit on current year's cane in autumn:</u> Time of beginning of fruit ripening on current year's cane	<u>Variétés dont la récolte est sur la jeune canne en automne:</u> Époque du début de la maturité des fruits sur la jeune canne	<u>Sorten, die an der Jahresrute im Herbstfrüchten:</u> Zeitpunkt des Beginns der Fruchtreife an der Jahresrute	<u>Variedades que fructifican en la rama del año en curso:</u> Época de comienzo de madurez del fruto en la rama del año en curso		
QN	very early	très précoce	sehr früh	muy temprana	Ariadne	1
	early	précoce	früh	temprana	Polana	3
	medium	moyenne	mittel	media	Orange Marie, Watson	5
	late	tardive	spät	tardía	Korbfüller	7
	very late	très tardive	sehr spät	muy tardía	Baronne de Wavre	9
46. (f) (+)	<u>Varieties which fruit on previous year's cane in summer:</u> Length of fruiting period on previous year's cane	<u>Variétés dont la récolte est sur la canne de l'année précédente en été:</u> Longueur de la période de récolte sur la canne de l'année précédente	<u>Sorten, die an der Vorjahresrute im Sommerfrüchten:</u> Dauer der Ernteperiode an der Vorjahresrute	<u>Variedades que fructifican en la rama del año anterior en verano:</u> Duración del período de fructificación en la rama del año anterior		
QN	short	courte	kurz	corto	Glen Moy	3
	medium	moyenne	mittel	medio	Glen Clova	5
	long	longue	lang	largo	Schönemann	7
47. (f) (+)	<u>Varieties which fruit on current year's cane in autumn:</u> Length of fruiting period on current year's cane	<u>Variétés dont la récolte est sur la jeune canne en automne:</u> Longueur de la période de récolte sur la jeune canne	<u>Sorten, die an der Vorjahresrute im Sommerfrüchten:</u> Dauer der Ernteperiode an der Vorjahresrute	<u>Variedades que fructifican en la rama del año en curso:</u> Duración del período de fructificación en la rama del año en curso		
QN	short	courte	kurz	corto	Boheme	3
	medium	moyenne	mittel	medio	Autumn Bliss, Heritage	5
	long	longue	lang	largo	Polana	7

8. Explanations on the Table of Characteristics

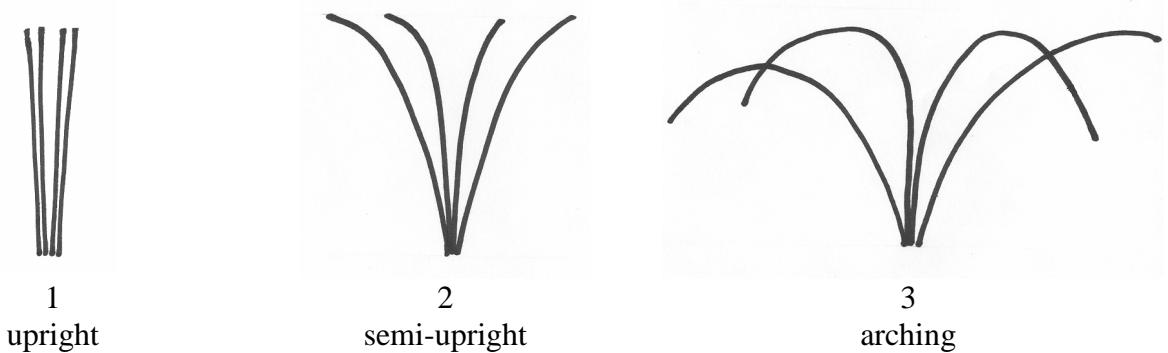
8.1 Explanations covering several characteristics

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

- (a) Very young shoot : Observations on the very young shoot should be made when the shoots are about 15 cm long.
- (b) Current season's cane : Observations on the current season's cane should be made when the cane is about 1 m to 1.50 m long. For summer bearing varieties, these observations should be made just after harvest, for autumn bearing ones just before or at harvest. The bloom of the current season's cane should only be observed when fully grown.
- (c) Spine: Observations on spines should be made in the middle third of the current season's cane, when the cane is about 1 m to 1.50 m long.
- (d) Leaf: Observations on the leaf should be made on fully developed leaves from the middle third of the cane.
- (e) Fruit: Observations on the fruit should be made on fruit picked during the second and third harvest.
- (f) Flower/fruit/length of the fruiting period : Observations on the flower and the fruit, as well as the length of the fruiting period, should be recorded from the summer harvest at the fruiting laterals only, except for varieties whose main fruiting is on the current year's cane in autumn. For these varieties, observations should be made during the autumn fruiting period.

8.2 Explanations for individual characteristics

Ad.1: Plant habit



Ad.2:Plant:numberofcurrentseason's shoots

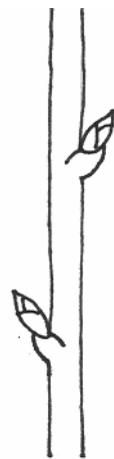
The number of current season's shoots should be considered as the number per meter length of the row before thinning for the first time observed in the beginning of the second year.

Ad.8:Currentseason's cane:lengthofvegetativebud

Observations on the vegetative bud should be made in the middle third of the cane.



3
short



5
medium

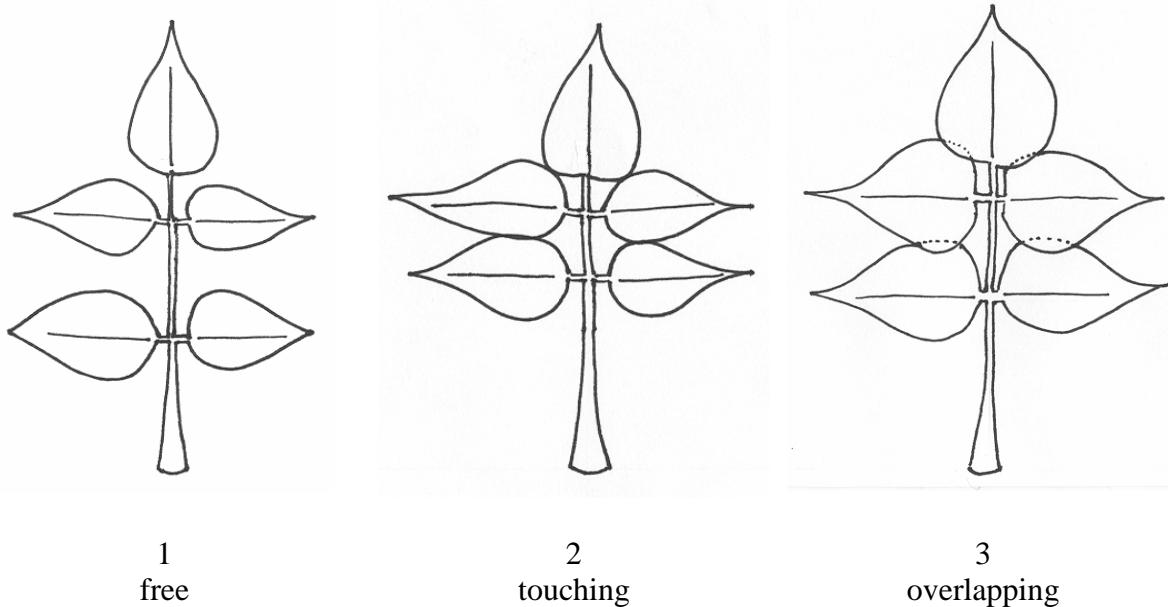


7
long

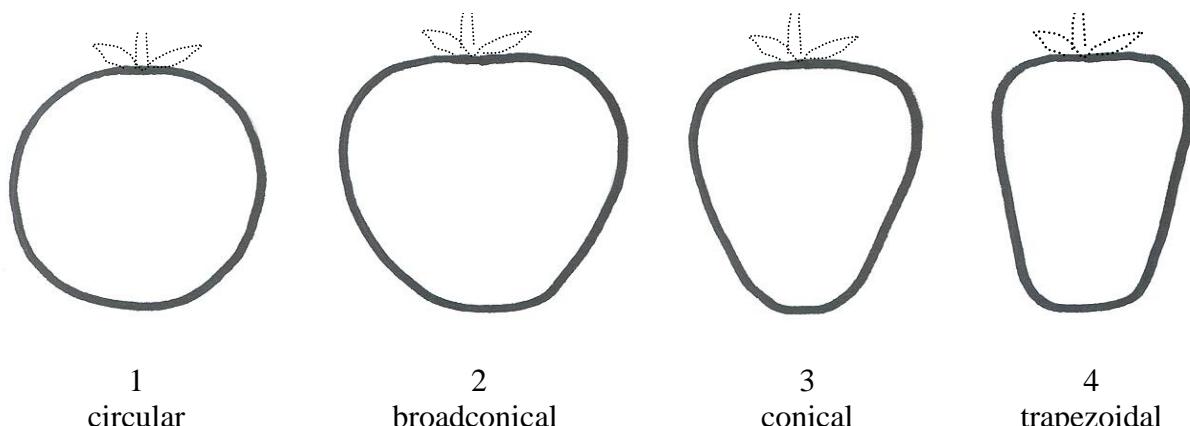
Ad.11:Varieties which fruit on previous year's cane in summer:Dormant cane:color

If the canes peel, the dominant color should be the color of the bark in an unpeeled area.

Ad.21:Leaf: relative position of lateral leaflets



Ad.33:Fruit: general shape in lateral view



Ads.40,42,44,46: Varieties which fruit on previous year's cane in summer :

Plant: time of vegetative budburst (40);

Time of beginning of flowering on previous year's cane (42);

Time of beginning of fruit ripening on previous year's cane (44);

Length of fruiting period on previous year's cane (46)

These characteristics apply to all varieties which either fruit on previous year's cane in summer only, or which fruit both on previous year's cane in summer and on current year's cane in autumn.

Ads.41,43,45,47: Varieties which fruit on current year's cane in autumn:

Time of cane emergence(41);

Time of beginning of flowering on current season's cane(43);

Time of beginning of fruit ripening on current year's cane(45);

Length of fruiting period on current year's cane(47)

These characteristics apply to all varieties which either fruit both on previous year's cane in summer and on current year's cane in autumn or which fruit on current year's cane in autumn only.

Ad.42: Time of beginning of flowering

The time of beginning of flowering should be considered as the time when 10% of the flowers have opened.

Ad.44: Time of beginning of fruit ripening

The time of fruit ripening should be considered as the time of eating ripeness, when the fruit is most easily removed from the plug.

9. Literature

Bordeianu, T.; Constantinescu, N.; Stefan, N., 1968: "Pomologia, Bd. VII", Editura Academiei Republicii Socialiste Romania, Bucares t, Romania.

Bundessortenamt, 1995: Beschreibende Sortenliste Beerenobst – Erdbeere, Himbeere, Brombeere, Stachelbeere, Landbuch Verlagsgesellschaft, Hannover, Germany.

"Internordic Index of Ribes and Rubus Cultivars", AVD för Fruktoch Bärodding, Alnarp, Sweden.

Leemans, I.A., Nannenga, E.T., 1957: "Raspberry Varieties", Instituut voor de Veredeling van Tuinbouwgewassen (IVT), Wageningen, Netherlands.

Sorge, P., 1984: "Beerenobstsorten", Verlag J. Neumann -Neudamm, Melsungen, Germany.

10. TechnicalQuestionnaire

TECHNICALQUESTIONNAIRE	Page{x}of{y}	ReferenceNumber:
		Applicationdate: (not to be filled in by the applicant)
<p style="text-align: center;">TECHNICALQUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p>		
1. Subject of the Technical Questionnaire		
1.1 LatinName	Rubus idaeus L.	
1.2 CommonName	Raspberry	
2. Applicant		
Name		
Address		
TelephoneNo.		
FaxNo.		
E-mailaddress		
Breeder(if different from applicant)		
3. Proposed denomination and breeder's reference		
Proposed denomination (if available)		
Breeder's reference		

TECHNICALQUESTIONNAIRE	Page{x}of{y}	ReferenceNumber:
<p>4. Informationonthebreedingschemeandpropagationofthevariety</p> <p>4.1 BreedingScheme</p> <p>Varietyresultingfrom:</p> <p>4.1.1 Crossing</p> <p>(a) controlledcross (pleasestateparentvarieties) <input type="checkbox"/></p> <p>(b) partiallyunknowncross (pleasestateknownparentvariety(ies)) <input type="checkbox"/></p> <p>(c) totallyunknowncross <input type="checkbox"/></p> <p>4.1.2 Mutation (pleasestateparentvariety) <input type="checkbox"/></p> <p>4.1.3 Discovery (pleasestatewhere,whenandhowdeveloped) <input type="checkbox"/></p> <p>4.1.4 Other (pleaseprovidedetails) <input type="checkbox"/></p> <p>4.2 MethodofPropagatingtheVariety</p> <p>4.2.1 Vegetativepropagation</p> <p>(a) <i>invitro</i> propagation <input type="checkbox"/></p> <p>(b) other(e.g.leafcutting,hardwoodcutting,layer) (statemethod) <input type="checkbox"/></p> <p>4.2.2 Seed <input type="checkbox"/></p> <p>4.2.3 Other (pleaseprovidedetails) <input type="checkbox"/></p> <p>4.3 Virusstatus</p> <p>4.3.1 Thevarietyisfreefromallknownvirusesasfollows: (indicatefromwhichviruses) <input type="checkbox"/></p> <p>4.3.2 Theplantmaterialisvirusteste d: (indicateagainstwhichviruses) <input type="checkbox"/></p> <p>4.3.3 Thevirusstatusisunknown <input type="checkbox"/></p>		

TECHNICALQUESTIONNAIRE	Page{x}of{y}	ReferenceNumber:
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:number of current season's shoots (2)		
few	Rubaca,Rucami	3[]
medium	GlenAmple,Multiraska,Rumiloba	5[]
many	GlenClova,Skeena	7[]
very many	Sumner	9[]
5.2 Very young shoot:anthocyanin coloration of apex during rapid growth (3)		
absent	GelbeAntwerpener	1
present	MallingPromise	9
5.3 Varieties which fruit on previous year's cane in summer : (11) Dormant cane:color		
brownishgrey	MallingLeo,Schöneman	1[]
greyishbrown	MallingOrion	2[]
brown	Caliber,GlenCova	3[]
purplishbrown	Festival,MallingLandmark	4[]
brownishpurple	Royalty,Titan	5[]
5.4 Spines:presence (12)		
absent	GlenMoy	1[]
present	MallingPromise	9[]
5.5 Fruit:ratio length/width (32)		
small	Caliber,Zefa2	3[]
medium	GlenClova,Rafzeter	5[]
large	MallingDelight,Tulameen	7[]

TECHNICALQUESTIONNAIRE	Page{x}of{y}	ReferenceNumber:
Characteristics	ExampleVarieties	Note
5.6 Fruit:generalshapeinlateralview (33)		
circular	MallingLandmar k,Ontario	1[]
broadconical	MallingOrion,Meeker	2[]
conical	Annamaria,Rafzmach	3[]
trapezoidal	Gradina	4[]
5.7 Fruit:color (35)		
yellow	GelbeAntwerpener,GoldenBliss	1[]
orange	OrangeMarie	2[]
lightred	MallingDelight	3[]
mediumred	GlenClova,MallingOrion	4[]
darkred	Gigant,Schönemann,Zefa2	5[]
purple	Royalty	6[]
darkpurple	DeepPurple	7[]
5.8 Fruit:mainbearingtype (39)		
onlyonpreviousyear'scaneinsummer	MallingPromise	1[]
bothon previousyear'scaneinsummerand oncurrentyear'scaneinautumn	Isabel	2[]
onlyoncurrentyear'scaneinautumn	AutumnBliss	3[]
5.9 Varietieswhichfruitonpreviousyear'scaneinsummer : (44) Timeofbeginningoffruitripeningonpreviou syear'scane		
veryearly	Vene	1[]
early	GlenClova,GlenMoy,Rafzmach	3[]
medium	Rusilva,Willamette	5[]
late	MallingLandmark,Schönemann	7[]
verylate	MallingLeo	9[]

TECHNICALQUESTIONNAIRE	Page{x}of{y}	ReferenceNumber:
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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

A representative color photograph of the variety should accompany the Technical Questionnaire.

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