



EUROPEAN UNION

COMMUNITY PLANT VARIETY OFFICE

PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS

***Ribes sylvestre* (Lam.) Mert. & W.D.J. Koch, *Ribes niveum* Lindl.**

RED AND WHITE CURRANT

UPOV Species Code: RIBES_NIV, RIBES_RUB

Adopted on 18/11/2004

I SUBJECT OF THE PROTOCOL

The protocol describes the technical procedures to be followed in order to meet the Council Regulation 2100/94 on Community Plant Variety Rights. The technical procedures have been agreed by the Administrative Council and are based on general UPOV Document TG/1/3 and UPOV Guideline TG/52/5 dated 12/10/1990 for the conduct of tests for Distinctness, Uniformity and Stability. This protocol applies to fruit varieties of *Ribes sylvestre* (Lam.)Mert. & W.D.J. Koch (Syn. *Ribes rubrum* L.) and *Ribes niveum* Lindl. (*Saxifragaceae*).

II SUBMISSION OF SEED AND OTHER PLANT MATERIAL

1. The Community Plant Variety Office (CPVO) is responsible for informing the applicant of

- the closing date for the receipt of plant material;
- the minimum amount and quality of plant material required;
- the examination office to which material is to be sent.

A sub-sample of the material submitted for test will be held in the variety collection as the definitive sample of the candidate variety.

The applicant is responsible for ensuring compliance with any customs and plant health requirements.

2. Final dates for receipt of documentation and material by the Examination Office

The final dates for receipt of requests, technical questionnaires and the final date or submission period for plant material will be decided by the CPVO and each Examination Office chosen.

The Examination Office is responsible for immediately acknowledging the receipt of requests for testing, and technical questionnaires. Immediately after the closing date for the receipt of plant material the Examination Office should inform the CPVO whether acceptable plant material has been received or not. However if unsatisfactory plant material is submitted the CPVO should be informed as soon as possible.

3. Plant material requirements

The final dates for request of technical examination and sending of Technical Questionnaire by the CPVO as well as submission date, quantity and quality of plant material by the applicant can be found in the S2 supplement of the CPVO Official Gazette and the CPVO website (www.cpvo.europa.eu).

Quality of plants: As regards the health status, should not be less than the standards laid down in Council Directive 77/93/EEC, 92/34/EEC and 2000/29/EC. The plant material must be free from:

Insects, mites and nematodes at all stages of their development

- *Aphelenchoides* spp.
- *Cecidophyopsis ribis*
- *Synanthedon tipuliformis*

Bacteria

- *Agrobacterium tumefaciens*

Fungi

- *Armillaria mellea*
- *Drepanopeziza ribis*
- *Nectria cinnabarina*
- *Rosellinia necatrix*
- *Verticillium* spp.

Viruses and virus-like organisms, and in particular

- Black currant reversion
- Black currant infections variegation agent

Chemical treatment: The plant material must not have undergone any treatment unless the CPVO and the examination office allow or request such treatment. If it has been treated, full details of the treatment must be given.

Labelling of individual plants in sample:

- Species
- File number of the application allocated by the CPVO
- Breeder's reference
- Examination office's reference (if known)
- Name of applicant
- The phrase "On request of the CPVO"

III CONDUCT OF TESTS

1. Variety collection

A variety collection will be maintained for the purpose of establishing distinctness of the candidate varieties in test. A variety collection may contain both living material and descriptive information. A variety will be included in a variety collection only if plant material is available to make a technical examination.

Pursuant to Article 7 of Council Regulation No. 2100/94, the basis for a collection should be the following:

- varieties listed or protected at the EU level or at least in one of the EEA Member States;
- varieties protected in other UPOV Member States;
- any other variety in common knowledge.

The composition of the variety collection in each Examination Office depends on the environmental conditions in which the Examination Office is located.

Variety collections will be held under conditions which ensure the long term maintenance of each accession. It is the responsibility of Examination Offices to replace reference material which has deteriorated or become depleted. Replacement material can only be introduced if appropriate tests confirm conformity with the existing reference material. If any difficulties arise for the replacement of reference material, Examination Offices must inform the CPVO. If authentic plant material of a variety cannot be supplied to an Examination Office the variety will be removed from the variety collection.

2. Material to be examined

Candidate varieties will be directly compared with other candidates for Community plant variety rights tested at the same Examination Office, and with appropriate varieties in the variety collection. When necessary an Examination Office may also include other candidates and varieties. Examination Offices should therefore make efforts to co-ordinate the work with other Offices involved in DUS testing of red and white currant. There should be at least an exchange of technical questionnaires for each candidate variety, and during the test period, Examination Offices should notify each other and the CPVO of candidate varieties which are likely to present problems in establishing distinctness. In order to solve particular problems Examination Offices may exchange plant material.

3. Characteristics to be used

The characteristics to be used in DUS tests and preparation of descriptions shall be those referred to in the Annex 1. All the characteristics shall be used, providing that observation of a characteristic is not rendered impossible by the expression of any other characteristic, or the expression of a characteristic is prevented by the environmental conditions under which the test is conducted. In the latter case, the CPVO should be informed. In addition the existence of some other regulation e.g. plant health, may make the observation of the characteristic impossible.

The Administrative Council empowers the President, in accordance with Article 23 of Commission Regulation N° 1239/95, to insert additional characteristics and their expression in respect of a variety.

4. Grouping of varieties

The varieties and candidates to be compared will be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety and which in their various states of expression are fairly evenly distributed throughout the collection. In the case of continuous grouping characteristics overlapping states of expression between adjacent groups is required to reduce the risks of incorrect allocation of candidates to groups. The characters used for grouping could be the following:

- a) Fruit truss : length including stalk (characteristic 19)
- b) Berry: size (characteristic 21)
- c) Berry: colour (characteristic 23)
- d) Time of fruit ripening (characteristic 26)

5. Trial designs and growing conditions

The minimum duration of tests (independent growing cycles) will normally include at least two satisfactory crops of fruit. Tests will be carried out under conditions ensuring normal growth. The size of the plots will be such that plants or parts of plants may be removed for measuring and counting without prejudice to the observations which must be made up to the end of the growing period.

The test design is as follows

Each test should include 4 plants.

All observations should be made on 10 parts of 4 plants.

All observations on the plant should be made on unpruned bushes in the dormant season.

All observations on the bud should be made at the time when they begin to swell.

All observations on the young shoot should be made on shoots of approximately 30 cm in length.

All observations on the young leaf should be made when the leaflets are about 1.5 cm wide.

All observations on the mature leaf should be made at the stage of fruit maturity on the upper third of typical one year old shoots.

All observations on the fruit truss and the berry should be made at the time when the fruit is ready to be picked.

The description of the variety should be supplemented by a shadowgraph of 4 typical leaves.

6. Special tests

In accordance with Article 83(3) of Council Regulation No. 2100/94 an applicant may claim either in the Technical Questionnaire or during the test that a candidate has a characteristic which would be helpful in establishing distinctness. If such a claim is made and is supported by reliable technical data, a special test may be undertaken providing that a technically acceptable test procedure can be devised.

Special tests will be undertaken, with the agreement of the President of CPVO, where distinctness is unlikely to be shown using the characters listed in the protocol.

7. Standards for decisions

a) **Distinctness**

A candidate variety will be considered to be distinct if it meets the requirements of Article 7 of Council Regulation No. 2100/94.

b) **Uniformity**

A candidate will be considered to be sufficiently uniform if the number of off-types does not exceed the number of plants as indicated in the table below. A population standard of 1% and an acceptance probability of 95% should be applied.

Table of maximum numbers of off-types allowed for uniformity standards.

Number of plants	off-types allowed
≤ 5	0

c) **Stability**

A candidate will be considered to be sufficiently stable when there is no evidence to indicate that it lacks uniformity.

IV REPORTING OF RESULTS

After each recording season the results will be summarised and reported to the CPVO in the form of a UPOV model interim report in which any problems will be indicated under the headings distinctness, uniformity and stability. Candidates may meet the DUS standards after two fruiting periods but in some cases three fruiting periods may be required. When tests are completed the results will be sent by the Examination Office to the CPVO in the form of a UPOV model final report.

If it is considered that the candidate complies with the DUS standards, the final report will be accompanied by a variety description in the format recommended by UPOV. If not the reasons for failure and a summary of the test results will be included with the final report.

The CPVO must receive interim reports and final reports by the date agreed between the CPVO and the examination office.

Interim reports and final examination reports shall be signed by the responsible member of the staff of the Examination Office and shall expressly acknowledge the exclusive rights of disposal of CPVO.

V LIAISON WITH THE APPLICANT

If problems arise during the course of the test the CPVO should be informed immediately so that the information can be passed on to the applicant. Subject to prior agreement, the applicant may be directly informed at the same time as the CPVO particularly if a visit to the trial is advisable.

The interim report as well as the final report shall be sent by the Examination Office to the CPVO.

ANNEXES TO FOLLOW

ANNEX I	<u>PAGE</u>
Table of characteristics	9
Legend:	
(+) See explanations on the Table of characteristics	
QL Qualitative characteristic	
QN Quantitative characteristic	
PQ Pseudo-qualitative characteristic	
Explanations and methods	14
Literature	15

ANNEX II

Technical Questionnaire

ANNEX I

TABLE OF CHARACTERISTICS TO BE USED IN DUS-TEST AND PREPARATION OF DESCRIPTIONS

CPVO N°	UPOV N°	Characteristics		Examples	Note
1. QN	1.	Plant: vigour	weak	Heros	3
			medium	Maarses Prominent	5
			strong	Erstling of Vierländer, Ruby Castle	7
2. QN	2.	Plant: density	sparse	Heros	3
			medium	Rote Vierländer	5
			dense	Mulka	7
3. QN	3.	Plant: growth habit	upright	Bad Gasteiner	3
			bushy	Rondom	5
			spreading	Heros	7
4. QN	4.	Plant: number of basal shoots	few	Heros	3
			medium	Rote Holländische	5
			many	Mulka	7
5. QN	5.	Time of bud burst	early	Rondom	3
			medium	Rote Vierländer	5
			late	Kaukasische Jonannisbeere	7
6. QN	6.	Bud: bloom	weak	Cascade	3
			medium	Palants Sämling	5
			strong	Houghton Castle	7
7. QN	7.	Inflorescence: number of flowers	few	Victoria	3
			medium	Heros	5
			many	Heinemanns Rote Spätlese	7

CPVO N°	UPOV N°	Characteristics		Examples	Note
8. QN	8.	Inflorescence: anthocyanin coloration of axis	absent or very weak	Heros	1
			weak	Laxtons N°1	3
			medium	Random	5
			strong	Heinemanns Rote Spätlese	7
			very strong		9
9. QN	9.	Flower: size	small	Maarses Prominent	3
			medium	Cascade	5
			large	Red Lake	7
10. (+) QN	10.	Flower: shape of calyx	flat saucered	Heros	1
			saucered	Houghton Castle	3
			flat cupped	Mulka	5
			cupped	Rote Holländische	7
			deep cupped		9
11. QN	11.	Flower: anthocyanin coloration of calyx	absent or very weak	Heros	1
			weak	Minnesota 69	3
			medium	Mulka	5
			strong	Bad Gasteiner	7
			very strong		9
12. QN	13.	Young leaf: green colour	light	Maarses Prominent	3
			medium	Cascade	5
			dark	Red Lake	7
13. QN	14.	Young shoot: anthocyanin coloration (leaf and stem)	absent or very weak	Maarses Prominent	1
			weak	Houghton Castle	3
			medium	Präkanda	5
			strong	Hochrote Frühe	7
			very strong		9

CPVO N°	UPOV N°	Characteristics		Examples	Note
14. QN	15.	Young shoot: pubescence	absent or very sparse	Rote Vierländer	1
			sparse	Red Lake	3
			medium	Heinemanns Rote Spätlese	5
			dense	Rondom	7
			very dense		9
15. QN	16.	Fully developed leaf: size	very small		1
			small	Mulka	3
			medium	Red Lake	5
			large	Bad Gasteiner	7
			very large	Präkanda	9
16. QN	17.	Fully developed leaf: main green colour of upper side	light	Weißer Kaiserliche	3
			medium	Laxtons N°1	5
			dark	Rote Holländische	7
17. QN		Fully developed leaf: anthocyanin coloration of petiole	absent or very weak	Rondom	1
			weak	Rovada, Witte Parel	3
			medium	Ruby Castle	5
			strong	Roogwod, Stanza	7
			very strong	Tatran	9
18. QN	18.	Fully developed leaf: thickness of petiole	thin	Mulka	3
			medium	Heros	5
			thick	Bad Gasteiner	7

CPVO N°	UPOV N°	Characteristics		Examples	Note
19. QN	20.	Fruit truss: length including stalk	very short	Amerikanische Gebirgstachelbeere	1
			short	Weißer aus Jüterborg	3
			medium	Rondom	5
			long	Heros	7
			very long	Traubenwunder	9
20. QN	21.	Fruit truss: length of stalk	short	Weißer aus Jüterborg	3
			medium	Rondom	5
			long	Traubenwunder	7
21. QN	22.	Berry: size	very small	Mulka	1
			small	Houghton Castle	3
			medium	Laxtons N°1	5
			large	Heros	7
			very large	Cascade	9
22. PQ	23.	Berry: shape	obloid	Laxtons N°1	1
			globose	Mulka	2
			pyriform	Rote Vierländer	3
23. PQ	24.	Berry: colour	white	Weißer Versailler	1
			whitish yellow	Witte Parel	2
			pink	Rosa Sport	3
			red	Victoria	4
			dark red	Loppersummer	5
24. QN	25.	Berry: firmness	soft	Laxtons N°1	3
			medium	Rote Vierländer	5
			firm	Rondom	7

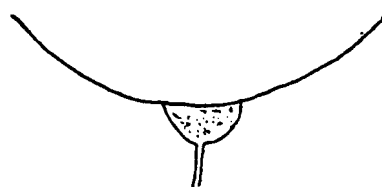
CPVO N°	UPOV N°	Characteristics		Examples	Note
25. QN	12.	Time of beginning of flowering	very early	Turiner	1
			early	Heros	3
			medium	Rote Vierländer	5
			late	Victoria	7
			very late	Mulka	9
26. QN	19.	Time of fruit ripening	very early	Jonkheer van Tets	1
			early	Heros	3
			medium	Mulka	5
			late	Rote Holländische	7
			very late	Heinemanns Rote Spätlese	9

EXPLANATIONS AND METHODS

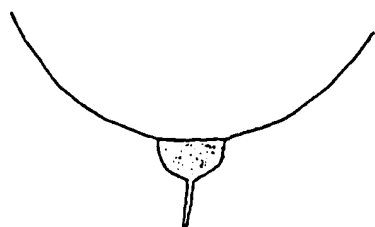
Ad. 10: Flower: shape of calyx



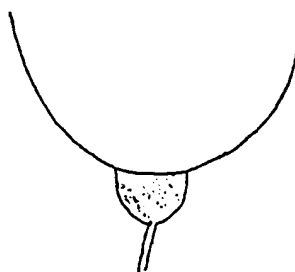
1
flat saucered



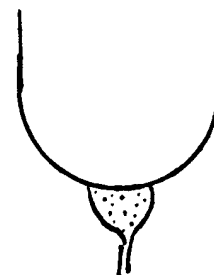
3
saucered



5
flat cupped



7
cupped



9
deep cupped

LITERATURE

Keipert, K., 1981: "Beerenobst", Ulmer Verlag, DE.

ANNEX II



European Union
Community Plant Variety Office

TECHNICAL QUESTIONNAIRE

to be completed in connection with an application for Community Plant Variety Rights
Please answer all questions. A question without any answer will lead to a non-attribution
of an application date. In cases where a field / question is not applicable, please state so.

1. **Botanical taxon:** Name of the genus, species or sub-species to which the variety belongs and common name

Ribes sylvestre (Lam.) Mert. & W.D.J. Koch

RED CURRANT

Ribes niveum Lindl.

WHITE CURRANT

2. **Applicant(s):** Name(s) and address(es), phone and fax number(s), Email address, and where appropriate name and address of the procedural representative

3. **Variety denomination**

a) Where appropriate proposal for a variety denomination:

b) Provisional designation (breeder's reference):

4. Information on origin, maintenance and reproduction of the variety**4.1 Breeding, maintenance and reproduction of the variety**

Please indicate breeding scheme, parents and other relevant information

Variety resulting from:

- (a) Crossing
- (i) controlled cross (indicate parent varieties).....[]
- (ii) partially unknown cross (indicate known parent varieties).....[]
- (iii) totally unknown cross.....[]
- (b) Mutation (indicate parent variety).....[]
- (c) Discovery (indicate where, when and how the variety has been developed):[]
- (d) Other (please provide details)[]

4.2 Method of propagation

- (a) Vegetative propagation
- (i) in vitro propagation []
- (ii) other (e.g. leaf cutting, hardwood cutting, layer)
(state method) []
- (b) Seed []
- (c) Other (please provide details) []

4.3 Virus status

- (a) The variety is free from all known viruses as follows
(indicate from which viruses) []
- (b) The plant material is virus tested
(indicate against which viruses) []
- (c) The virus status is unknown []

4.4 Geographical origin of the variety: the region and the country in which the variety was bred or discovered and developed

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in the CPVO Protocol; please mark the state of expression which best corresponds).			
	Characteristics	Example varieties	Note
5.1 (19)	Fruit truss: length including stalk		
	very short	Amerikanische Gebirgstachelbeere	1 []
	short	Weißer aus Jüterborg	3 []
	medium	Rondom	5 []
	long	Heros	7 []
	very long	Traubenwunder	9 []
5.2 (21)	Berry: size		
	very small	Mulka	1 []
	small	Houghton Castle	3 []
	medium	Laxtons N°1	5 []
	large	Heros	7 []
	very large	Cascade	9 []
5.3 (23)	Berry: colour		
	white	Weißer Versailler	1 []
	whitish yellow	Witte Parel	2 []
	pink	Rosa Sport	3 []
	red	Victoria	4 []
	dark red	Loppersummer	5 []
5.4 (26)	Time of fruit ripening		
	very early	Jonkheer van Tets	1 []
	early	Heros	3 []
	medium	Mulka	5 []
	late	Rote Holländische	7 []
	very late	Heinemanns Rote Spätlese	9 []

6. Similar varieties and differences from these varieties:Denomination of
similar varietyCharacteristic in which the
similar variety is different¹⁾State of expression
of similar varietyState of expression of
candidate variety

¹⁾ In the case of identical states of expressions of both varieties, please indicate the size of the difference

7. Additional information which may help to distinguish the variety

A representative printed-out colour photo of the variety **must** be added to the Technical Questionnaire.

7.1 Resistance to pests and diseases**7.2 Special conditions for the examination of the variety**

YES, please specify

NO

7.3 Other information

YES, please specify

NO

8. GMO-information required

The variety represents a Genetically Modified Organism within the meaning of Article 2(2) of Council Directive EC/2001/18 of 12/03/2001.

YES NO

If yes, please add a copy of the written attestation of the responsible authorities stating that a technical examination of the variety under Articles 55 and 56 of the Basic Regulation does not pose risks to the environment according to the norms of the above-mentioned Directive.

9. Information on plant material to be examined

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 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 the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

- | | | |
|---|------------------------------|-----------------------------|
| (a) Microorganisms (e.g. virus, bacteria, phytoplasma) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (b) Chemical treatment (e.g. growth retardant or pesticide) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (c) Tissue culture | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (d) Other factors | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Please provide details of where you have indicated "Yes":

I/we hereby declare that to the best of my/our knowledge the information given in this form is complete and correct.

Date

Signature

Name

[End of document]