TG/RUMEX(proj.2)
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UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

DOCK, GARDEN SORREL

UPOV Code: RUMEX_ATS

Rumex acetosa L.

*

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from Ukraine

to be considered by the Technical Working Party for Vegetables at its forty-first session, to be held in Nairobi, Kenya, from June 11 to 15, 2007

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Rumex acetosa L.	Dock, Garden Sorrel	Oseille	Sauerampfer	Acedera común

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

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

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Rumex acetosa* L. of the family *Poligonaceae*.

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:

10 g of seeds

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.

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

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. Method of Examination

3.1 Number of Growing Cycles

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

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 “Examining Distinctness”.

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

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

3.4 Test Design

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

3.4.2 Each test should be designed to result in at least 40 plants, which should be divided between two or more replicates. The varieties should be grouped on the most distinct morphological characteristics. The test for distinctness is conducted in the field by way of comparison with the varieties of common knowledge, collections of which is laid out beside.

The first growing cycle: type of plot A (see Table below) with a total number of not less than 100 plants divided into two replicates.

The second growing cycle: four types of plots:

- row plot of type A: is sown with seeds of an applicant;
- row plot of type A_{-1}: is sown with seeds of the last year which obtained from an applicant for examination of stability;
- plots of type B: is sown with seeds of panicles which supplied by an applicant (20 panicles, 1 g from each panicle);
- plots of type P: if it is necessary plot is sown with seeds of panicles which are chosen from all off - type plants harvested from all plots of the candidate variety.

Types of plots and assessment

Plot		Kind of test	Notes
Type	Appellation		
A	row	distinctness uniformity stability	the first and the second growing cycles with seeds of each year submitted by an applicant
A_1	row	stability	the second growing cycle with seeds obtained from an applicant of the first growing cycle
B	panicle	uniformity stability	the second growing cycle with panicles submitted by an applicant (20 panicles)
P	panicle 2 (special)	uniformity	It is sown if necessary to find out the causes of heterogeneity. During the second growing cycle with panicles selected from off-type plants and gathered from all plots of the candidate variety.

Plot parameters

Plot Parameters							
type of plot	number of replications	number of rows	length m	Width m	Area m^2	rows width cm	distance between plants in the row cm
The first year of tests							
A	2	4	2,0	1,5	3,0	45	5,0
The second year of tests							
A	2	4	2,0	1,5	3,0	45	5,0
A1	1	4	2,0	1,5	3,0	45	5,0
B	1	20				45	10.0
P	1		2,0	1,5	1,5	45	10.0

3.5 Number of plants / parts of plants to be examined

Unless otherwise indicated, all observations should be made on 40 plants or parts of plants taken from each of 40 plants.

Number of plants					
Type of plot	to assess				
	Distinctness	Uniformity		Stability	
		QN	QL	QN	QL
The first year of tests					
A	all	20	all	-	-
The second year of tests					
A	all	20	all	-	-
A_1	-	-	-	20	all
B	-	20	all	20	all
P	-	20	all	-	-

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 differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

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 For the assessment of uniformity on a row plot, a population standard of 3.0% and an acceptance probability of at least 95% are used. In the case of sample size of 40 plants, the maximum number of 3 off-type is allowed. In confirmation of test's reliability for uniformity, the results taken from panicles plots are considered.

4.2.3 For the assessment of uniformity on single “panicle” rows, a population standard of 1% and an acceptance probability of at least 95 % should be applied. In the case of a sample size of 20 plants, a number of 5 off-type is allowed.

4.3 Stability

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

4.3.2 Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new seed 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 are 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: height (characteristic 2);
(b) Plant: time of panicle emergence (characteristic 24);
(c) Inflorescence: color (characteristic 29).

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 Chapter 6.1.2

QL: Qualitative characteristic – see Chapter 6.3
QN: Quantitative characteristic – see Chapter 6.3
PQ: Pseudo-qualitative characteristic – see Chapter 6.3

MG, MS, VG, VS: See Chapter 3.3.2

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

Codes of phases of plant varieties development

№	Phaces of growing and development
1-st year of growing (a)	
1	Germination
2	1st - 3nd true leaves
3	Rosette
2–nd and the folowing years of growing (b)	
4	Shoot growing
5	Rosette
6	Stem formation
7	Flower formation
8	Blooming/Flowering
9	Fruit bearing stage
10	Seed ripening stage

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

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
1. **(*)** **(+)**	**VG**	**Plant: height**					
QN	**(a)**	short				Odesckiy 17, Shirokolistiy	3
		medium				Kyivskiy ultra, Rumex OK-2	5
		long				Biekor-1	7
2. **(*)** **(+)**	**VG**	**Plant: height**					
QN	**(b)**	short				Odesckiy 17, Shirokolistiy	3
		medium				Rumex OK-2	5
		long				Biekor-1, Kyivskiy ultra	7
3. **(+)**	**VG**	**Plant: attitude**					
QN		erect				Biekor-1, Kyivskiy ultra	1
		medium				Shirokolistiy	3
		prostrate				Odesckiy 17, Rumex OK-2	5
4. **(+)**	**VG**	**Plant: number of propagules**					
QN		few				Odesckiy 17, Shirokolistiy	3
		medium				Rumex OK-2	5
		many				Biekor-1, Kyivskiy ultra	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
5.	**VG**	**Leaf: intensity of green color**					
QN		light				Kyivskiy ultra	3
		medium				Biekor-1	5
		dark				Odesckiy 17, Shirokolistiy	7
6.	**VS**	**Stem: shape in cross-section**					
(+)							
PQ		oval				Shirokolistiy	1
		round				Biekor-1, Kyivskiy ultra	2
		rectangular				Odesckiy 17	3
		polyhedral				Rumex OK-2	4
7.	**VS**	**Stem: pubescence**					
QN		absent or very weak				Kyivskiy ultra, Odesckiy 17	1
		weak				Biekor-1, Rumex OK-2	2
		strong					9
8.	**VG**	**Stem: diameter**					
(+)							
QN		small				Odesckiy 17, Shirokolistiy	3
		medium				Kyivskiy ultra, Rumex OK-2	5
		large				Biekor-1	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
9.	**MS**	**Stem: number of internodes**					
QN		few				Odesckiy 17, Shirokolistiy	3
		medium				Kyivskiy ultra	5
		many				Biekor-1	7
10.	**VG**	**Stem: anthocyanin coloration**					
QL		absent				Odesckiy 17, Shirokolistiy	1
		present				Biekor-1, Kyivskiy ultra, Rumex OK-2	9
11.	**VG**	**Stem: intensity of anthocyanin coloration**					
QN		light				Biekor-1, Kyivskiy ultra	3
		medium				Rumex OK-2	5
		dark				Biekor-1	7
12. **(+)**	**MS/ VG**	**Rosette leaf: length**					
QN	**(a)**	short				Odesckiy 17	3
		medium				Kyivskiy ultra, Rumex OK-2	5
		long				Biekor-1	7
13. **(+)**	**MS/ VG**	**Rosette leaf: width**					
QN	**(a)**	narrow				Odesckiy 17	3
		medium				Shirokolistiy, Rumex OK-2	5
		broad				Biekor-1, Kyivskiy ultra	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
14.	**MS/ VG**	**Rosette leaf: ratio width/length**					
QN	**(a)**	small				Odesckiy 17	3
		medium				Shirokolistiy, Rumex OK-2	5
		large				Biekor-1, Kyivskiy ultra	7
15a. **(+)**	**VG**	**Rosette leaf: undulationof margin**					
QN	**(a)**	absent or weak				Kyivskiy ultra Odesckiy 17	1
		medium				Biekor-1	2
		strong				Rumex OK-2	3
15b. **(+)**	**MS/ VG**	**Rosette leaf: incision of margin**					
QN	**(a)**	entirely or weakly incised				Shirokolistiy	1
		moderately incised					2
		strongly incised					3
16. **(+)**	**MS/ VG**	**Rosette leaf: length of petiole**					
QN	**(a)**	short				Odesckiy 17, Shirokolistiy	3
		medium				Kyivskiy ultra, Rumex OK-2	5
		long				Biekor-1	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
17.	**VG**	**Leaf: length of blade**					
QN		short				Odesckiy 17	3
		medium				Rumex OK-2, Shirokolistiy	5
		long				Biekor-1, Kyivskiy ultra	7
18.	**VG**	**Leaf: width of blade**					
QN		narrow				Odesckiy 17	3
		medium				Kyivskiy ultra, Rumex OK-2	5
		broad				Biekor-1, Shirokolistiy	7
19.	**MS**	**Leaf index: Leaf: ratio width/length**					
QN		small				Odesckiy 17	3
		medium				Rumex OK-2, Shirokolistiy	5
		large				Biekor-1, Kyivskiy ultra	7
20a. **(+)**	**VG**	**Leaf: undulation of margin**					
QN	**(b)**	absent or weak				Kyivskiy ultra, Odesckiy 17	1
		medium				Biekor-1	2
		strong				Rumex OK-2	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
20b. **(+)**	**VG**	**Leaf: incision of margin**					
QN	**(b)**	entire or weakly incised				Shirokolistiy	1
		moderately incised					2
		strongly incised					3
21. **(+)**	**VG**	**Leaf: length of petiole**					
QN		short				Odesckiy 17, Shirokolistiy	3
		medium				Kyivskiy ultra, Rumex OK-2	5
		long				Biekor-1	7
22.	**VG**	**Leaf: surface**					
QN		smooth or slightly rough				Odesckiy 17, Kyivskiy ultra	3
		moderatley rough				Biekor-1, Shirokolistiy	5
		very rough				Rumex OK-2	7
23.	**VG**	**Plant: tendency to form inflorescence in the year of sowing**					
QL		absent				Biekor-1, Kyivskiy ultra, Rumex OK-2	1
		present				Odesckiy 17, Shirokolistiy	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
24.	**MS**	**Plant: time of panicle emergence**					
QN	**(b)**	very early				Odesckiy 17, Shirokolistiy	1
		early				Kyivskiy ultra	3
		medium				Biekor-1	5
		late				Rumex OK-2	7
25.	**MS/ VG**	**Plant: number of flowering stems**					
QN	**(b)**	few				Odesckiy 17, Shirokolistiy	3
		mean quantity				Rumex OK-2	5
		many				Biekor-1, Kyivskiy ultra	7
26.	**MS**	**Time of flowering:**					
QN	**(b)**	early				Biekor-1, Odesckiy 17	3
		medium				Kyivskiy ultra, Shirokolistiy	5
		late				Rumex OK-2	7
27.	**VG**	**Inflorescence: type**					
(+)							
QL		spreading panicle				Odesckiy 17	1
		composite				Biekor-1, Kyivskiy ultra	2
		botryoidal				Rumex OK-2, Shirokolistiy	3

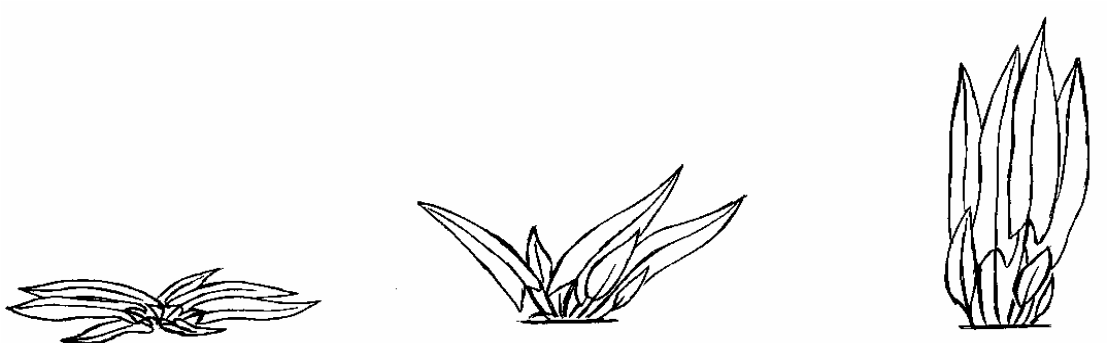
		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
28. (+)	**MS/ VG**	**Inflorescence: length**					
QN		short				Odesckiy 17, Shirokolistiy	3
		medium				Kyivskiy ultra, Rumex OK-2	5
		long				Biekor-1	7
29. (*)	**VG**	**Inflorescence: color**					
PQ		greenish pink				Kyivskiy ultra	1
		brown pink				Odesckiy 17, Shirokolistiy	2
		brown				Biekor-1	3
		red brown				Rumex OK-2	4
30.	**MS/ VG**	**Flowering stem: length**					
QN		very short				Odesckiy 17	1
		short				Shirokolistiy	3
		medium				Kyivskiy ultra	5
		long				Biekor-1	7
		very long				Rumex OK-2	9
31.	**MS**	**Seed: time of ripening**					
QN		early				Odesckiy 17, Shirokolistiy	3
		medium				Biekor-1, Rumex OK-2	5
		late				Kyivskiy ultra	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
32.	**VG**	**Seed: intensity of brown color**					
QN		light					3
		moderate				Biekor-1, Kyivskiy ultra	5
		dark				Odesckiy 17	7
33.	**VG**	**Seed: glossiness**					
QL		absent				Biekor-1, Kyivskiy ultra, Rumex OK-2	1
		present				Odesckiy 17, Shirokolistiy	9
34.	**MS**	**Seed: 1000 kernels weight**					
QN		small				Odesckiy 17, Shirokolistiy	3
		medium				Kyivskiy ultra, Rumex OK-2	5
		large				Biekor-1	7
35.	**VS**	**Root: stage of branching**					
(+)							
QN		weak				Odesckiy 17, Shirokolistiy	3
		medium				Rumex OK-2	5
		strong				Biekor-1, Kyivskiy ultra	7

8. Explanations on the Table of Characteristics

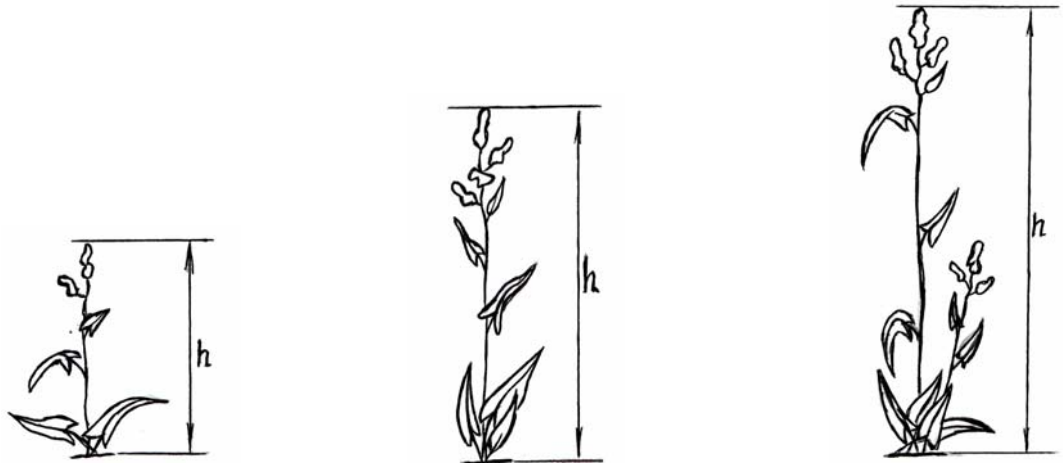
8.1 Explanations for individual characteristics

Ad. 1: Plant: height (a)



3	5	7
short	medium	long

Ad. 2: Plant: height (b)



3	5	7
short	medium	long

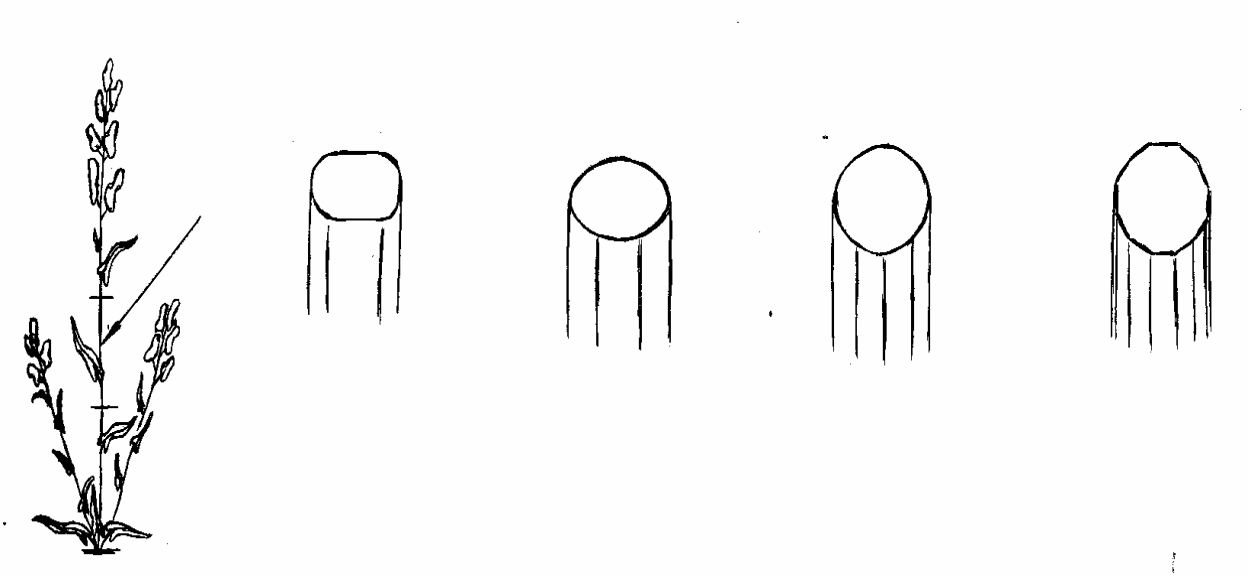
Ad. 3: Plant: attitude

1	3	5
erect	medium	prostrate

Ad. 4: Plant: number of propagules

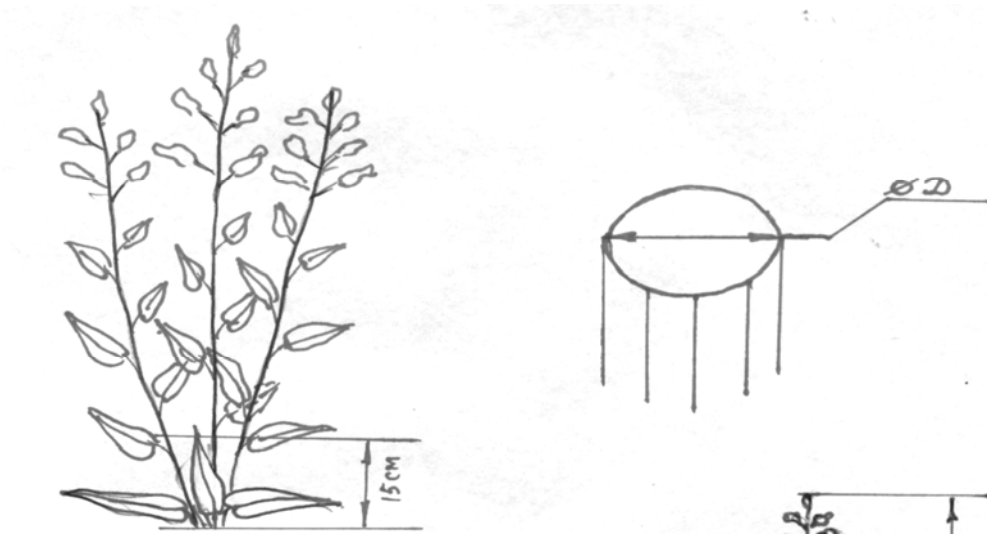
3	5	7
few	medium	many

Ad. 6: Stem: shape in cross-section



1	2	3	4
oval	round	rectangular	polyhedral

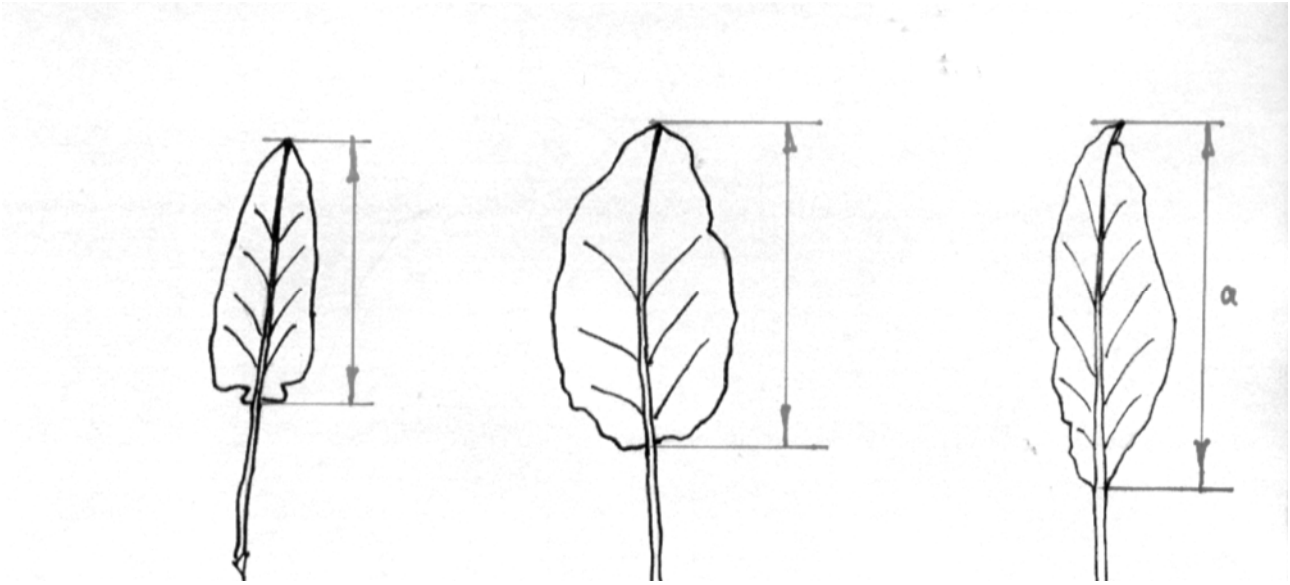
Ad. 8: Stem: diameter



3	5	7
small	medium	large

Ad. 12: Rosette leaf: length

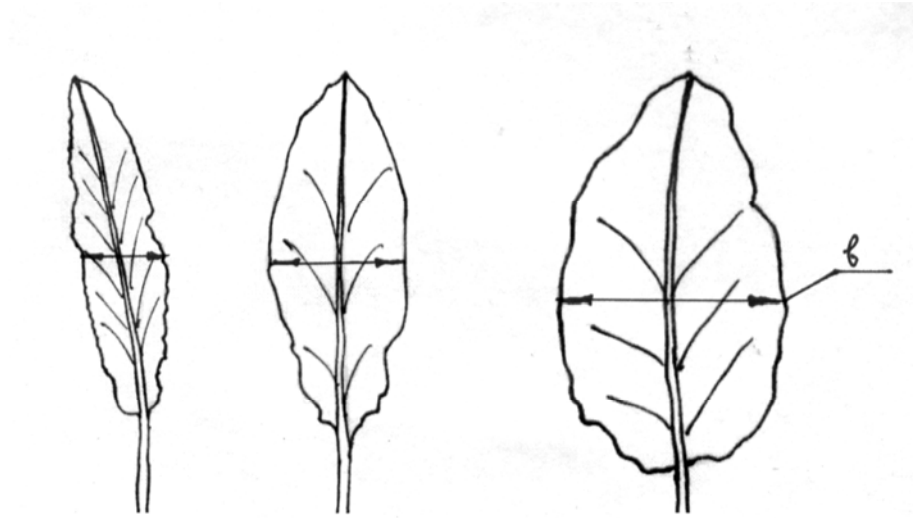
(a - length)



3	5	7
short	medium	long

Ad. 13: Rosette leaf: width

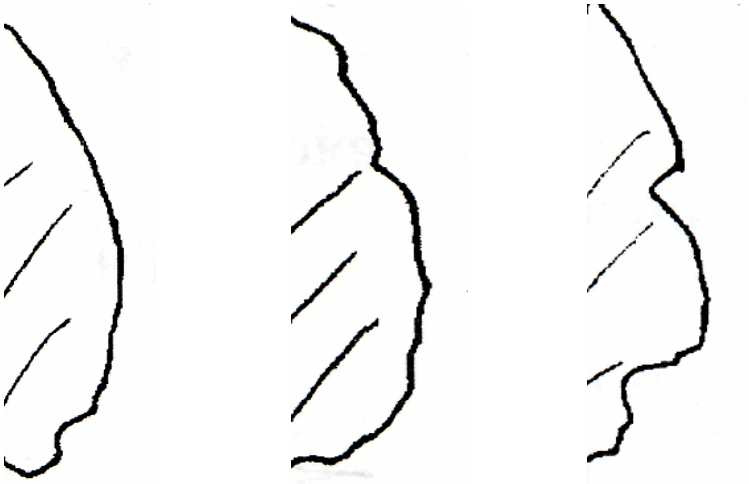
(*в* - width)



3	5	7
narrow	medium	broad

Ad. 15a.: Rosette leaf: undulation of margin

Ad. 15b.: Rosette leaf: incision of margin

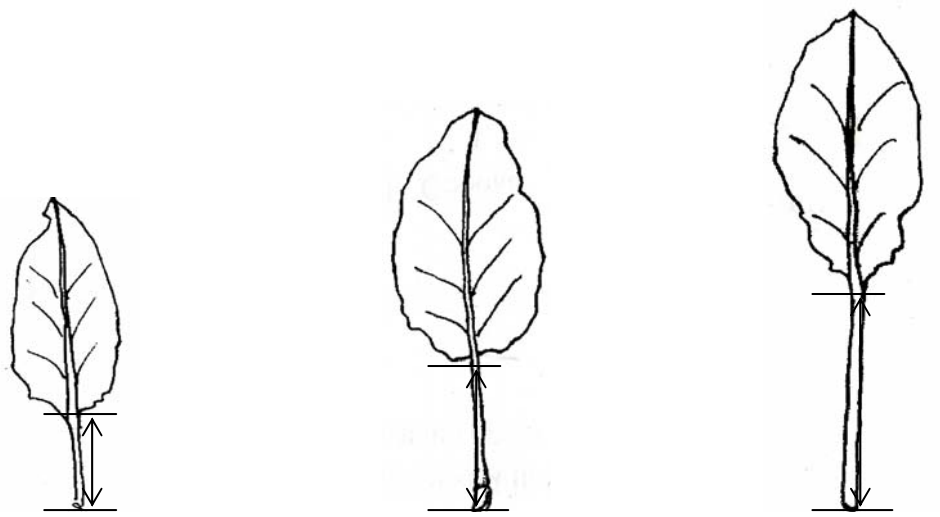


1
absent or weak

2
medium

3
short

Ad. 16: Rosette leaf: length of petiole



3
short

5
medium

7
long

Ad. 20a.: Leaf: undulation of margin
Ad, 20b.: Leaf: incision of margin

See Ad. 15

Ad. 21: Leaf: length of petiole

See Ad. 16

Ad. 27: Inflorescence: type

1
spreading panicle

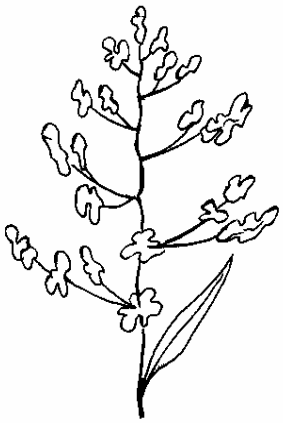
2
composite

3
botryoidal

Ad. 28: Inflorescence: length

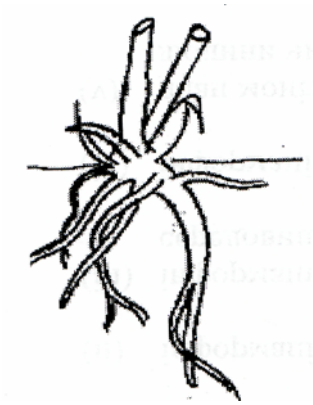
1
short

3
medium

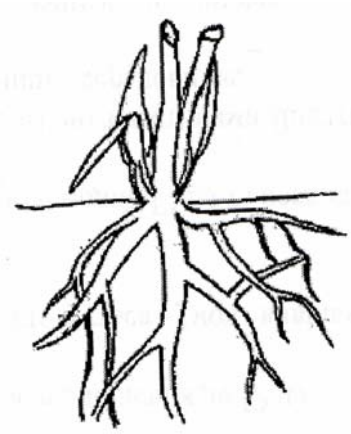


5
long

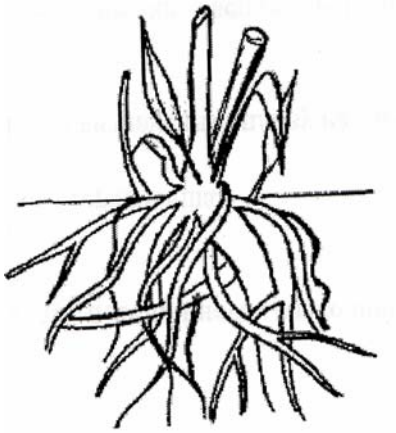
Ad. 35: Root: stage of branching



3
weak



5
medium



7
strong

9. Literature

Dong Baodi, Liu Satoshi Yamada, Hideyasu Fujiama, SunaoYamazaki, Toshiaki Tanado, Li Dengshum, Study of the introduction of Rumex K-1 hybrid of sorrel in saline soil. 1999.6.8.

Goodwin B.C. Biological stability//Towards a theoretical biology, - Chicago: Aldine, 1970.

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 Botanical Name	*Rumex acetosa* L.
1.2 Common Name	Dock, Garden Sorrel

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	

3. Proposed denomination and breeder's reference

Proposed denomination (if available)	
Breeder's reference	

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

[#]4. Information on the breeding scheme and propagation of the variety

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]
(please state parent varieties)

(b) partially known cross [ ]
(please state known parent variety(ies))

(c) unknown cross [ ]

4.1.2 Mutation [ ]
(please state parent variety)

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

4.1.4 Other [ ]
(please provide details)

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 Variety	Note
5.1 (1)	**Plant: height**		
	short	Odesckiy 17, Shirokolistiy	3[ ]
	medium	Kyivskiy ultra, Rumex OK-2	5[ ]
	long	Biekor-1	7[ ]

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

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

	Characteristics	Example Variety	Note
5.2 (2)	**Plant: height**		
	short	Odesckiy 17, Shirokolistiy	3[ ]
	medium	Rumex OK-2	5[ ]
	long	Biekor-1, Kyivskiy ultra	7[ ]
5.3 (3)	**Plant: attitude**		
	erect	Biekor-1, Kyivskiy ultra	1[ ]
	medium	Shirokolistiy	3[ ]
	prostrate	Rumex OK-2, Odesckiy 17	5[ ]
5.4 (4)	**Plant: number of propagules**		
	few	Odesckiy 17, Shirokolistiy	3[ ]
	medium	Rumex OK-2	5[ ]
	many	Biekor-1, Kyivskiy ultra	7[ ]
5.5 (8)	**Stem: diameter**		
	small	Odesckiy 17, Shirokolistiy	3[ ]
	medium	Kyivskiy ultra, Rumex OK-2	5[ ]
	large	Biekor-1	7[ ]
5.6 (12)	**Rosette leaf: length**		
	short	Odesckiy 17	3[ ]
	medium	Kyivskiy ultra, Rumex OK-2	5[ ]
	long	Biekor-1	7[ ]

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

	Characteristics	Example Variety	Note
5.7 (15a)	**Rosette leaf: undulation of margin**		
	absent or weak	Kyivskiy ultra Odesckiy 17	1[ ]
	medium	Biekor-1	2[ ]
	strong	Rumex OK-2	3[ ]
5.8 (16)	**Rosette leaf: length of petiole**		
	short	Odesckiy 17, Shirokolistiy	3[ ]
	medium	Kyivskiy ultra, Rumex OK-2	5[ ]
	long	Biekor-1	7[ ]
5.9 (19)	**Leaf index: Leaf: ratio width/length**		
	small	Odesckiy 17	3[ ]
	medium	Rumex OK-2, Shirokolistiy	5[ ]
	large	Biekor-1, Kyivskiy ultra	7[ ]
5.10 (20a)	**Leaf: undulation of margin**		
	absent or weak	Kyivskiy ultra, Odesckiy 17	1[ ]
	medium	Biekor-1	2[ ]
	strong	Rumex OK-2	3[ ]
5.11 (27)	**Inflorescence: type**		
	spreading panicle	Odesckiy 17	1[ ]
	composite	Biekor-1, Kyivskiy ultra	2[ ]
	botryoidal	Rumex OK-2, Shirokolistiy	3[ ]

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

	Characteristics	Example Variety	Note
5.12 (28)	**Inflorescence: length**		
	short	Odesckiy 17, Shirokolistiy	3[ ]
	medium	Kyivskiy ultra, Rumex OK-2	5[ ]
	strong	Biekor-1	7[ ]
5.13 (29)	**Inflorescence: color**		
	greenish pink	Kyivskiy ultra	1[ ]
	brown-pink	Odesckiy 17, Shirokolistiy	2[ ]
	brown	Biekor-1	3[ ]
	red-brown	Rumex OK-2	4[ ]
5.14 (35)	**Root: stage of branching**		
	weak	Odesckiy 17, Shirokolistiy	3[ ]
	medium	Rumex OK-2	5[ ]
	strong	Biekor-1, Kyivskiy ultra	7[ ]

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

6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example		*(example to be inserted)*	*(example to be inserted)*

Comments:

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

Yes [ ] No [ ]

(If yes, please provide 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.

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

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

9. Information on plant material to be examined or submitted for examination.

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) Yes [ ] No [ ]

(b) Chemical treatment (e.g. growth retardant, pesticide) Yes [ ] No [ ]

(c) Tissue culture Yes [ ] No [ ]

(d) Other factors Yes [ ] No [ ]

Please provide details for where you have indicated "yes".

……

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

Applicant's name

Signature Date

[End of document]