

UPOV

TG/Rumex(proj.1)

ORIGINAL: English

DATE: May 18, 2006

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

DOCK

UPOV Code: RUMEX

Rumex 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 (TWP)
at its fortieth session to be held in Guanajuato, Guanajuato State, Mexico,
from June 12 to 16, 2006*

Alternative Names: *

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Rumex L.</i>	Dock (Sorrel)			

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.]

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1. SUBJECT OF THESE TEST GUIDELINES.....	3
2. MATERIAL REQUIRED	3
3. METHOD OF EXAMINATION.....	3
3.1 Number of Growing Cycles	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.....	5
3.6 Additional Tests	6
4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY	6
4.1 Distinctness	6
4.2 Uniformity.....	7
4.3 Stability	7
5. GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL.....	7
6. INTRODUCTION TO THE TABLE OF CHARACTERISTICS	8
6.1 Categories of Characteristics.....	8
6.2 States of Expression and Corresponding Notes.....	8
6.3 Types of Expression	8
6.4 Example Varieties	8
6.5 Legend.....	8
7. TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES.....	9
8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS	18
8.1 Explanations for individual characteristics	18
9. LITERATURE.....	25
10. TECHNICAL QUESTIONNAIRE.....	26

1. Subject of these Test Guidelines

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

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 and 20 panicles.

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

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

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

3. Method of Examination

3.1 *Number of Growing Cycles*

The minimum duration of tests should normally be two 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*

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.

3.3.1 Stage of development for the assessment

A number in the second column of the Table of Characteristics indicates the optimum stage of development for the assessment of each characteristic.

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

3.3.3 Observation of color by eye

Because daylight varies, color determination made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the lighting appliance for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

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 carried out with a total number of not less than 100 plants (the first growing cycle) and not less than 40 plants (the second growing cycle) 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 plot:

- 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

Type	Plot Appellation	Kind of test	Notes
A	row	distinctness uniformity stability	the first and the second growing cycles with seeds of each year submitted by an applicant
A1	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	<u>It is sown if necessary to find out the causes of heterogeneity.</u> 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 20 plants or parts of plants taken from each of 20 plants.

Number of plants					
Type of plot	to assess				
	Distinctness	Uniformity		Stability	
		20	10	20	10
The first year of tests					
A	all	20	all	-	-
The second year of tests					
A	all	20	all	-	-
A1	-	-	-	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 0.5 % and an acceptance probability of at least 95 % are used. In the case of a sample size of 100 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 for distinctness and uniformity. However, experience has demonstrated that, for many types of varieties, 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; (b) to organize the growing trial so that similar varieties are grouped together.

5.3 It is recommended to use for grouping the following characteristics:

- (a) Plant of the second growing cycle: height, (characteristic 2);
- (b) Second year of growing: Plant: time of inflorescence emergence (characteristic 25);
- (c) Inflorescence: coloration (characteristic 30);

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided in 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: single measurement of a group of plants or parts of plants – see Chapter 3.3.2

MS: measurement of a number of individual plants or parts of plants – see Chapter 3.3.2

VG: visual assessment by a single observation of a group of plants or parts of plants – Chapter 3.3.2

VS: visual assessment by observation of individual plants or parts of plants” – see Chapter 3.3.2

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

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

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
1. MG	Plant of the first growing cycle: height					
(*)						
(+)						
QN	short				Odesckiy 17, Shirokolistiy	3
	medium				Kyivskiy ultra, Rumex OK-2	5
	high				Biekor-1	7
2. MG	Plant of the second growing cycle: height					
(*)						
(+)						
QN	short				Odesckiy 17, Shirokolistiy	3
	medium				Rumex OK-2	5
	high				Biekor-1, Kyivskiy ultra	7
3. VG	Plant: growth habit					
(+)						
QN	erect				Biekor-1, Kyivskiy ultra	1
	semi-erect				Shirokolistiy	3
	prostrate				Rumex OK-2, Odesckiy 17	5
4. VG	Plant: formation of propagules					
(+)						
QN	weak				Odesckiy 17, Shirokolistiy	3
	medium				Rumex OK-2	5
	strong				Biekor-1, Kyivskiy ultra	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
5. VS	Leaf: intensity of green coloration					
QN	light				Kyivskiy ultra	3
	medium				Biekor-1	5
	dark				Odesckiy 17, Shirokolistiy	7
6. VS	Caulis: form of cross-section					
QL	rectangular				Odesckiy 17	1
	oval				Shirokolistiy	2
	rounded				Biekor-1, Kyivskiy ultra	3
	polyhedral				Rumex OK-2	4
7. VG	Caulis: pubescence					
QL	absent				Odesckiy 17	1
	present				Biekor-1, Kyivskiy ultra, Rumex OK-2	9
8. VS	Caulis: intensity of pubescence					
QN	weak				Kyivskiy ultra, Odesckiy 17	3
	medium				Biekor-1, Rumex OK-2	5
	strong					7
9. VS	Caulis: 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
10. VS	Caulis: number of internodes					
QN	small				Odesckiy 17, Shirokolistiy	3
	medium				Kyivskiy ultra	5
	large				Biekor-1	7
11. MG VS	Caulis: anthocyanin coloration					
QL	absent				Odesckiy 17, Shirokolistiy	1
	present				Biekor-1, Kyivskiy ultra, Rumex OK-2	9
12. MG VS	Caulis: intensity of anthocyanin coloration					
QN	weak				Biekor-1, Kyivskiy ultra	3
	medium				Rumex OK-2	5
	strong				Biekor-1	7
13. (+)	<u>Rosette: first year of growing:</u> Leaf: length of blade					
QN	short				Odesckiy 17	3
	medium				Kyivskiy ultra, Rumex OK-2	5
	long				Biekor-1	7
14. VS	<u>Rosette: leaf index:</u> <u>first year of growing:</u> Leaf: width of blade					
QN	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
15. VS	<u>Rosette: leaf index:</u> <u>first year of growing:</u> Leaf: ratio width/length					
QN	small				Odesckiy 17	3
	medium				Shirokolistiy, Rumex OK-2	5
	large				Biekor-1, Kyivskiy ultra	7
16. VS	<u>Rosette: first year of</u> <u>growing: Leaf: shape</u> <u>of the edge of blade</u>					
(+)						
QL	smooth-edged				Kyivskiy ultra, Odesckiy 17	1
	weak wavy				Biekor-1	2
	wavy				Rumex OK-2	3
	weak-toothed				Shirokolistiy	4
17. VS	<u>Rosette: first year of</u> <u>growing: Leaf: length</u> <u>of petiole</u>					
(+)						
QN	short				Odesckiy 17, Shirokolistiy	3
	medium				Kyivskiy ultra, Rumex OK-2	5
	long				Biekor-1	7
18. VS	<u>On caulis: Leaf:</u> <u>length of blade</u>					
QN	short				Odesckiy 17	3
	medium				Rumex OK-2, Shirokolistiy	5
	long				Biekor-1, Kyivskiy ultra	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
19. VS	<u>On caulis:</u> Leaf: width of blade					
QN	narrow				Odesckiy 17	3
	medium				Kyivskiy ultra, Rumex OK-2	5
	broad				Biekor-1, Shirokolistiy	7
20. VS	<u>On caulis:</u> Leaf index:					
(+)	Leaf: ratio width/length					
QL	small				Odesckiy 17	3
	medium				Rumex OK-2, Shirokolistiy	5
	large				Biekor-1, Kyivskiy ultra	7
21. VS	<u>On caulis:</u> Leaf: shape of the edge of blade					
(+)						
PQ	smooth-edged				Kyivskiy ultra, Odesckiy 17	1
	weak wavy				Biekor-1	2
	wavy				Rumex OK-2	3
	weak-toothed				Shirokolistiy	4
22. VS	<u>On caulis:</u> Leaf: length of petiole					
(+)						
QN	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
23. VS	Leaf: softness					
QL	tender				Odesckiy 17, Kyivskiy ultra	3
	medium				Biekor-1, Shirokolistiy	5
	rough				Rumex OK-2	7
24. 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
25. VG	<u>Second year of growing</u>: Plant: time of inflorescence emergence					
QN	very early				Odesckiy 17, Shirokolistiy	1
	early				Kyivskiy ultra	3
	medium				Biekor-1	5
	late				Rumex OK-2	7
26. VG	Plant: a number of generative sprouts					
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
27. VG	<u>Second year of growing:</u> Plant: early flowering					
	early				Biekor-1, Odesckiy 17	3
	medium				Kyivskiy ultra, Shirokolistiy	5
	late				Rumex OK-2	7
28. VS	Inflorescence: shape					
(+)						
QL	spreading panicle				Odesckiy 17	1
	composite				Biekor-1, Kyivskiy ultra	2
	botryoidal				Rumex OK-2, Shirokolistiy	3
29. VS	Inflorescence: length					
(+)						
QN	short				Odesckiy 17, Shirokolistiy	3
	medium				Kyivskiy ultra	5
	long				Biekor-1, Rumex OK-2	7
30. VS	Inflorescence: coloration					
(*)						
PQ	light green pink				Kyivskiy ultra	1
	brown pink				Odesckiy 17, Shirokolistiy	2
	brown				Biekor-1	3
	red brown				Rumex OK-2	4

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
31. VG	<u>Phase of full inflorescence:</u> Caulis: length					
QN	very short				Odesckiy 17	1
	short				Shirokolistiy	3
	medium				Kyivskiy ultra	5
	long				Biekor-1	7
	very long				Rumex OK-2	9
32. VG	<u>Seeds: time of ripening</u>					
QN	early				Odesckiy 17, Shirokolistiy	3
	medium				Biekor-1, Rumex OK-2	5
	late				Kyivskiy ultra	7
33. VS (*)	<u>After cutting: plant: intensity of growing</u>					
QN	slow				Odesckiy 17, Shirokolistiy	3
	medium				Kyivskiy ultra	5
	quick				Biekor-1, Rumex OK-2	7
34. VG	<u>Seeds: simultaneity of ripening</u>					
QL	absent				Odesckiy 17	1
	present				Biekor-1, Kyivskiy ultra, Rumex OK-2, Shirokolistiy	9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
35. VS	Seeds: intensity of brown coloration					
QN	light					3
	medium				Biekor-1, Kyivskiy ultra	5
	dark				Odesckiy 17	7
36. VS	Seeds: glossiness					
QL	absent				Biekor-1, Kyivskiy ultra, Rumex OK-2	1
	present				Odesckiy 17, Shirokolistiy	9
37. VS	Seeds: 1000 kernels weight					
QN	small				Odesckiy 17, Shirokolistiy	3
	medium				Kyivskiy ultra, Rumex OK-2	5
	large				Biekor-1	7
38. VS	Roots: stage of branching					
(+)						
QN	weak				Odesckiy 17, Shirokolistiy	3
	medium				Rumex OK-2	5
	strong				Biekor-1, Kyivskiy ultra	7
39. VS	<u>Length of the main root:</u> Roots: depth of root penetration into soil:					
QN	not deep				Odesckiy 17 Shirokolistiy	3
	medium				Kyivskiy ultra, Rumex OK-2,	5
	deep				Biekor-1	7

8. Explanations on the Table of Characteristics

8.1 *Explanations for individual characteristics*

Ad. 1: Plant of the first growing cycle: height



3
short
(up to 20 cm)



5
medium
(21-40 cm)



7
high
(41-71 cm)

Ad. 2: Plant of the second growing cycle: height



3
short
(up to 140 cm)



5
medium
(141-170 cm)



7
high
(171-260 cm)

Ad. 3: Plant: growth habit



1
erect

3
semi-erect

9
prostrate

Ad.4: Plant: formation of propagules



3
weak



5
medium



7
strong

Ad. 6: Caulis: form of the cross-section



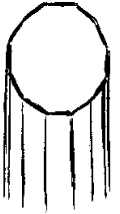
1
rectangular



2
oval



3
rounded



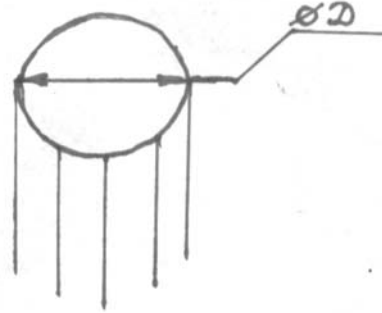
4
polyhedral

Ad. 9: Caulis: diameter



3

(small- up to 10 mm)



5

(medium - 11-17 mm)



7

(large -18-27 mm)

Ad. 16: Rosette: first year of growing: Leaf: shape of edge of blade

Ad. 21: On caulis: Leaf: shape of the edge of blade



1
smooth-edged



2
weak wavy



3
wavy



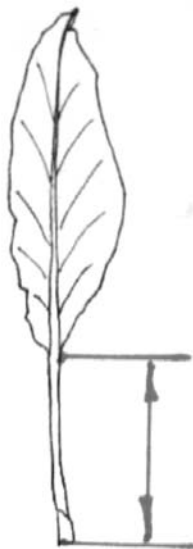
4
weak-toothed

Ad. 17: Rosette: first year of growing: Leaf: length of petiole

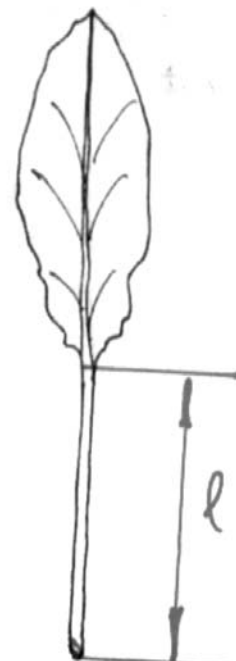
Ad. 22: On caulis: Leaf: length of petiole



3
short
(up to 10 cm)

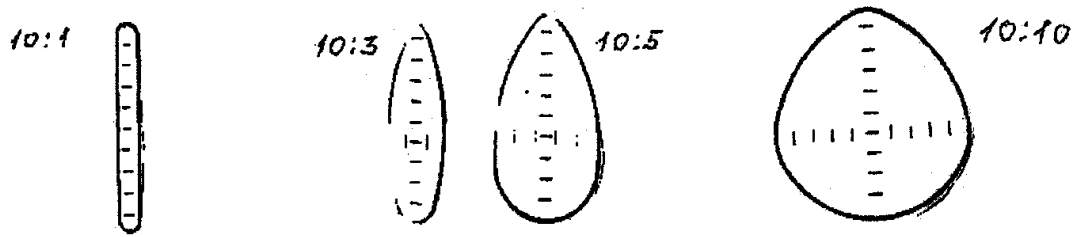


5
medium
(11-19 cm)-



7
long
(20-45 cm)

Ad. 20: Leaf: ratio width/length



Ad. 28: Inflorescence: shape

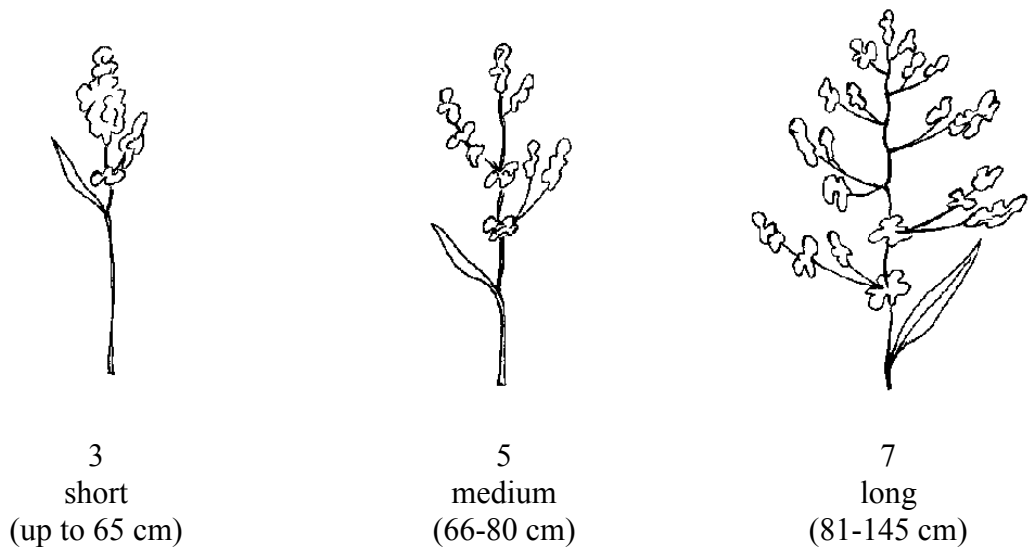


1
spreading panicle

2
composite

3
botryoidal

Ad. 29: Inflorescence: length

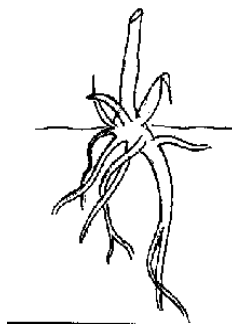


3
short
(up to 65 cm)

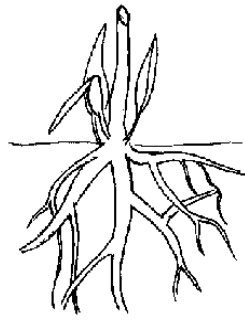
5
medium
(66-80 cm)

7
long
(81-145 cm)

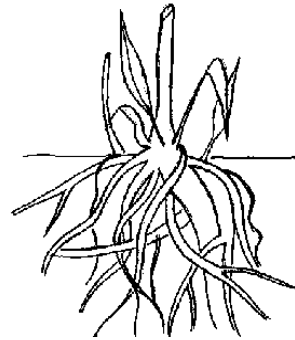
Ad. 38: Roots: stage of branching



3
weak



5
medium



7
strong

9. Literature

Dong Baodi, Liu Xiajing, Satoshi Yamada, Hideyasu Fujiyama, Sunao Yamazaki, Toshiaki Tadano, Li Dengshun. 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. – P. 1 – 17.

10. Technical Questionnaire

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

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

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

4.1 Breeding scheme

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) totally unknown cross

4.1.2 Mutation

(please state parent variety)

4.1.3 Discovery

(please state where, when and how developed)

4.1.4 Other

(please provide details)

4.2 Method of propagating the variety

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

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 of the first growing cycle: height (1)		
short	Odeskiy 17, Shirokolistiy	3[]
medium	Kyivskiy ultra, Rumex OK-2	5[]
high	Biekor-1	7[]
5.2 Plant of the second growing cycle: height (2)		
short	Odeskiy 17, Shirokolistiy	3[]
medium	Rumex OK-2	5[]
high	Biekor-1, Kyivskiy ultra	7[]
5.3 Plant: growth habit (3)		
erect	Biekor-1, Kyivskiy ultra	1[]
semi-erect	Shirokolistiy	3[]
prostrate	Rumex OK-2 Odeskiy 17	5[]
5.4 Plant: formation of propagules (4)		
weak	Odeskiy 17 Shirokolistiy	3[]
medium	Rumex OK-2	5[]
strong	Biekor-1, Kyivskiy ultra	7[]

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

Characteristics	Example Varieties	Note
5.5	Caulis: diameter	
(9)		
small	Odeskiy 17, Shirokolistiy	3[]
medium	Kyivskiy ultra, Rumex OK-2	5[]
large	Biekor-1	7[]
5.6	<u>Rosette: first year of growing:</u> Leaf: length of blade	
(13)		
short	Odeskiy 17	3[]
medium	Kyivskiy ultra, Rumex OK-2	5[]
long	Biekor-1	7[]
5.7	<u>Rosette: first year of growing:</u> Leaf: shape of edge of blade	
(16)		
smooth-edged	Kyivskiy ultra, Odeskiy 17	1[]
weakly wavy	Biekor-1	2[]
wavy	Rumex OK-2	3[]
weak-toothed	Shirokolistiy	4[]
5.8	<u>Rosette: first year of growing:</u> Leaf: length of petiole	
(17)		
short	Odeskiy 17, Shirokolistiy	3[]
medium	Kyivskiy ultra, Rumex OK-2	5[]
long	Biekor-1	7[]

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

Characteristics	Example Varieties	Note
5.9 <u>On caulis:</u> Leaf index: Leaf: ratio width/length (20)		
small	Odeskiy 17	3[]
medium	Rumex OK-2, Shirokolistiy	5[]
large	Biekor-1, Kyivskiy ultra	7[]
5.10 <u>On caulis:</u> Leaf: shape of the edge of blade (21)		
smooth-edged	Kyivskiy ultra, Odeskiy 17	1[]
weak wavy	Biekor-1	2[]
wavy	Rumex OK-2	3[]
weak-toothed	Shirokolistiy	4[]
5.11 <u>Inflorescence:</u> shape (28)		
spreading panicle	Odeskiy 17	1[]
composite	Biekor-1, Kyivskiy ultra	2[]
botryoidal	Rumex OK-2, Shirokolistiy	3[]
5.12 <u>Inflorescence:</u> length (29)		
short	Odeskiy 17, Shirokolistiy	3[]
medium	Kyivskiy ultra	5[]
long	Biekor-1, Rumex OK-2	7[]

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

Characteristics	Example Varieties	Note
5.13 Inflorescence: coloration (30)		
light green pink	Kyivskiy ultra	1[]
brown pink	Odesckiy 17, Shirokolistiy	2[]
brown	Biekor-1	3[]
red brown	Rumex OK-2	4[]
5.14 After cutting: Plant: intensity of growing (33)		
slow	Odesckiy 17, Shirokolistiy	3[]
medium	Kyivskiy ultra	5[]
quick	Biekor-1, Rumex OK-2	7[]
5.15 Roots: stage of branching (38)		
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 table and space provided for comments below 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) of the characteristic(s) for your candidate variety
---	---	--	---

<i>Example</i>	<i>(example to be inserted) (example to be inserted)</i>	
----------------	--	--

--

--

--

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 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

ASW 16 A representative color photograph of the variety should accompany the Technical Questionnaire.

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

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.

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

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) | Yes [] | No [] |
| (b) Chemical treatment (e.g.growth retardant or pesticide) | Yes [] | No [] |
| (c) Tissue culture | Yes [] | No [] |
| (d) Other factors | Yes [] | No [] |

Please provide details of 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]