

HYBRID RYEGRASS (*Lolium x boucheanum* Kunth) DESCRIPTORS

III CHARACTERIZATION AND EVALUTION DESCRIPTORS

Methods of HYBRID RYEGRASS evolution and characterisation:

Each plot of the hand-sown HYBRID RYEGRASS contained two rows, each 2 m long, distance between rows are 30 cm. Distance between plots are 60 cm. Of each plot are 2 m x 60 cm = 1.2 m². Number of replicates: - optimal - 3, minimal - 2, arrangement was random.

Standard cultivar: hybrid ryegrass 'Saikava' is included in the total sample evaluation.

Length of sward use was: sowing year plus two additional years of use.

Nutrition was applied in the spring N₆₀ P₆₀ K₉₀ and after first grass cutting, if plots were not planned to use for seed production. Seed production plots N₆₀P₆₀K₉₀ nutrition was applied in the spring only.

Grass was cut after evaluation which is 3 weeks after flowering at the beginning of July.

Characteristics was determined by using 9 point system

Characterization of testing location:

- a. Country of characterization
- b. Institute name and address
- c. Institute site (latitude, longitude, elevation)
- d. Sowing date
- e. Harvest date
- f. Percentage field establishment
- g. Plot size
- h. Number of replications
- i. Fertilizer (types, doses)
- j. Plant protection

ENVIRONMENT CHARACTERISTIC

- k. Soil type
- l. Relief
- m. Soil pH
- n. Soil organic matter content
- o. Soil texture

Descriptor code	Number of trait in other descriptors	Descriptor scale (score)	Reference values	Remarks
Characterisation				
III/1		Leaf width in the autumn of year of sowing		
	² UPOV TG/4/7-No 11	1 very narrow 3 narrow 5 medium 7 wide 9 very wide	5 score– ‘Saikava’	Determine in the autumn of the sowing year, when begin to cluster
III/2		Leaf color in the autumn of year of sowing		
	UPOV TG/4/7-No 5	1 very light green 3 light green 5 medium green 7 dark green 9 very dark green	7 score- ‘Saikava’	Determine in the autumn of the sowing year
III/3		Tendency to heading in the autumn of year of sowing		
	¹ IBPGR /85/72 4.2.1.	1 none 3 small 5 medium 7 large 9 very large	No culm formation. The plot contains some flowered or flowering culms. Very large number of flowered of flowering culms.	Determine to clustering plants

III/4		Winterhardness		
	¹ IBPGR /85/72 4.1.5.	1 none damaged	<10 % damaged	Determine in the spring, begining of regrowth, I decade in May
		5 medium damaged	50% of the sward has survived	
		9 decay		
III/5		Regrowth in the spring		
		1 very slowe	5 score- ‘Saikava’	Determine at the time of clustering in the spring
		3 slowe		
		5 medium		
		7 rapid		
		9 very rapid		
III/6		Growth direction at the beginning of regrowth		
	UPOV TG/4/7-No 6	1 erect	0-10 ⁰	Determine in spring during clustering
		3 semi- erect	11-34 ⁰	
		5 medium	35-56 ⁰	
		7 semi-prostrate	57-79 ⁰	
		9 prostrate	80-90 ⁰	
III/7		Leaf color in the spring		
	UPOV TG/4/7-No 9	1 very light green	7 score- ‘Saikava’	Determine at the time of clustering
		3 light green		
		5 medium green		
		7 dark green		
		9 very dark green		
III/8		Time of inflorescence emergence		
	IBPGR /85/72 4.2.2.1.	1 very early	7 score- ‘Saikava’	Determined at the beginning of inflorescence emergence, please, imndicate date. On the plot at least 4-5 spikelets have lost sheath of the leaf at the beginning date of flowering planēts is border value for qualitative livestock feed.
		3 early		
		5 medium		
		7 late		
		9 very late		

III/9		Inflorescence emergence intensity		
	IBPGR /85/ 72 4.2.2.2.	1 some ears 3 weak 5 medium 7 many 9 uniform		Determine at the blossoming
III/10		Awnedness		
		1 none 3 some plants 5 party plants 7 $\frac{3}{4}$ plants 9 whole plants	3 score- 'Saikava'	Determine two weeks after blossoming in all plot
III/11		Culm number		
		1 very few 3 few 5 medium 7 many 9 very much	Very few culms on the plot are formed.	Determine two weeks after blossoming
III/12		Flag leaf width		
	IBPGR /85/ 72 6.2.3. UPOV TG/4/7- No 11	1 very narrow 3 narrow 5 medium 7 wide 9 very wide		Determine two weeks after blossoming
III/13		Flag leaf length		
	IBPGR /85/ 72 6.2.4. UPOV TG/4/7- No 10	1 very short 3 short 5 medium 7 long 9 very long		Determine two weeks after blossoming

III/14		Length of longest culms		
	IBPGR /85/ 72 6.2.5. UPOV TG/4/7- No 12	1 very short 3 short 5 medium 7 long 9 very long	7 score- 'Saikava'(100-110 cm)	Determine using 3-5 fully developed culms
III/15		Estimates of herbage yield 1st cut		
		1 very low 5 medium 9 very high		Determine in early summer, I decade in June
III/16		Sward length in the regrowth cut		
		1 low 5 medium 9 high		Determine in September before the end of vegetation
III/17		Culm development in the regrowth		
		1 none culm 3 weak 5 medium 7 pronounced 9 very pronounced	No culm formation. The plot contains some flowered or flowering culms. Very large number of flowered of flowering culms.	Determine end of August or begining in September
III/18		Disease persistence in the autumn: Puccinia coronata – Crown rust (leaves, culms)		
	IBPGR /85/ 72 8.2.1.	1 healthy 5 medium damaged 9 highly damaged		Determine in August or September depending of the crown rust persistence.
III/19		Disease persistence in the autumn: Drechslera dictyoides– etc. leaf spots		
	IBPGR /85/ 72 8.2.2.	1 healthy 5 medium damaged 9 highly damaged		Determine in August or September
III/20	Notes			Any other additional information

III/21	Cytological characteristics and identified genes	
III/22	Molecular markers	
III/23	Pictures	

Explanations and References

¹IBPGR descriptors (1985.)

²UPOV – DUS test guidelines, TG/4/7, 1990

1. Plant Genetic Resources and Database, [http://www. igergru.bbsrc.ac.uk/welcome/gru/collaboration/agris/download/download.htm](http://www.igergru.bbsrc.ac.uk/welcome/gru/collaboration/agris/download/download.htm)
2. Forage grass descriptors. AGPG:IBPGR/85/72 March 1985, pp 30.
3. Robert F Barones, C. Jerry Nelson, Michael Collins, Kenneth J. Moore. 2003. Forages. Volume I. Structure and Morphology of Grasses. Chapter 2. Iowa State Press, USA. 25-49.
4. Chapman, GP. 1996. The biology of grasses. Wallingford, UK: CAB International.
5. Tērauds V. 1958. Pļavas un ganības. LVI. R., lpp. 440.