

LUCERNE (*Medicago sativa* L.) DESCRIPTORS

III CHARACTERISATION AND EVALUATION DESCRIPTORS

Legumes genetic resources evaluation methodology:

Accessions are sowing in the field in spring, without cover culture with hands. Each accession take 2 m long 2 rows. Distance between rows are 60 cm, but between plots 1 m. Each plot are 1 m² large. Minimal replicates number are 2-3, arrangement was random.

Standart cultivars are:

for lucerne – “Skrīveru”;

for alsike clover – “Menta” (2n), “Fricis” (4n);

for red clover – “Skrīveru agrais”, “Stendes vēlais”, “Skrīveru tetra”.

Standart cultivars were included in the common sample evaluation. Accession evaluation time is: sowing year and two next using year – together 3 year.

Nutrition KP was applied in the spring, in next year plots are fertilized whiz complex minerals 200 kg/ha.

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. Plant protection

ENVIRONMENT CHARACTERISTIC

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

- o. Temperature range (year and/or the seasonal mean, maximum, minimum)
- p. Frost (date and lowest temperature of most recent frost)

Descript or code	Number of trait in other descriptor	Descriptor scale (score)	Reference values	Remark
Characteristic				
III/1		Tendency to form inflorescences in sowing year		
	IPGRI 4.3.1	1 very low 5 medium 9 very high	Flowered same plants 50% of plants Practically all plants	Evaluate in the beginning of September in all plot (row).
III/2		Winter damage (after first winter)		
	IPGRI 4.4.1	1 very little or not damage 5 medium damage 9 very high	< 10% 50% > 90%	In spring, two weeks after beginning vegetation.
III/3		Regrow after winter		
		1 very low 5 medium 9 very high	3 cm 10 cm 20 cm	In spring, two weeks after beginning vegetation.
III/4		Expressed as a mean angle of the shoots from vertical scale		
	IPGRI 4.2.1. UPOV TG 6/4 – No.3	1 very erect 9 very prostrate		At flowering.
III/5		Length of central leaflet		
	IPGRI 4.1.1. UPOV TG 6/4 - No.5	1 very short 9 very long	< 2 cm > 2 cm	At flowering, measure 5 plants.
III/6		Width of central leaflet		
	IPGRI 4.1.2. UPOV TG 6/4 –	1 very narrow 2 very broad	< 1 cm > 1 cm	At flowering, measure 5 plants.

	No.6			
III/7		Shape of leaf		
	IPGRI 4.1.3.	3 elongated 5 oval 7 round		Evaluate in all plot (row), at flowering.
III/8		Length of longer stem		
	IPGRI 4.2.2. UPOV TG 6/4 – No.2	1 very short 9 very long	40-50cm -100 cm and more	At flowering, measure 5 plants.
III/9		Thickness of stem		
	IPGRI 4.2.3.	1 very thin 9 very thick		At flowering.
III/10		Date of flowering		
	IPGRI 4.3.2. UPOV TG 6/4 - No.7	1 very early 9 very late	end of may end of june	Day when 50% of plants first show petal color development on an inflorescence.
III/11		Percentage of each clover		
	IPGRI 4.3.4. IPGRI 4.3.4. IPGRI 4.3.4. IPGRI 4.3.4. IPGRI 4.3.4.	1 white 2 yellow 3 light blue – violet 4 dark blue – violet 5 red - violet		At flowering.
III/12		Variegation		
	IPGRI 4.3.5. UPOV TG 6/4 – No.9	1 very little 9 very much	Percentage of plant with variegated flowers.	At flowering.
III/13		Profuseness of flowering		
	IPGRI 4.4.3.	1 sparse 9 very profuse		At flowering.

III/14		Lodging		
		1 very low 9 very high		Full flowering.
III/15		Yield of first cut		
	IPGRI 4.4.2.2.	1 very low 9 very high		In beginning of flowering. Yield relative to adjusted designed control.
III/16		Yield of second cut		
	IPGRI 4.4.2.3.	1 very low 9 very high		In beginning of flowering. Yield relative to adjusted designed control.
III/17		Yield of third cut		
	IPGRI 4.4.2.4.	1 very low 9 very high		In beginning of flowering, September.
III/18		Shape of spirals (number of ring)		
		1-3		Before harvesting.
III/19		Resistance to verticillium		
	IPGRI 8.3.	1 very low 3 very high		
III/20	Notes			Any other additional information
III/21	Cytological characteristics and identified genes			
III/22	Molecular markers			
III/23.	Pictures			

Explanations and references

1. М. И. Тарковский Люцерна. Москва.1974.
2. Ž. Eglītis Lucerna. Grāmatu apgāds. Rīga.1996.
3. J. Holms Lucerna. Liesma. 1980.

¹IPGRI descriptor (1985.g.)

²UPOV – DUS test guidelines TG/6/4, 1990.g.

