

Forage and Barley ECPGR workshop, 14-16 March 2017,
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A priority descriptor list for forages

Development of recommended list of traits
with reference varieties



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Background

- ECPGR working group on forages – Workplan for 2015-2018
- Activity: Characterization and evaluation (C&E) data
- One topic: Development of a trait short list for characterization implemented during regeneration
- Aim: To have standardized basic characterization data for AEGIS accessions (AQUAS)

Aims

Enlarge EURISCO with C&E data!!!



For User's

Overview about
C&E data

Availability of C&E in
different Genebank's

Which C&E data?
Which genus/species?
Which quality?

For Genebank's

Management
priority in maintenance

AEGIS and EFC
accessions
(unique and valuable)

IBPGR Descriptor list for forage grasses

- Tyler, Hayes and Davies, in March 1985
- This includes
 1. accessions data,
 2. collection data (as passport data),
 3. site data,
 4. plant data:
 - 4.1. vegetative and
 - 4.2. generative (inflorescences)(as characterization and preliminary evaluation data)

IPK Descriptor list for forage grasses

- since 2000, for characterization and evaluation
- These include different traits to
 1. Development/growth of plant over season,
 2. Morphological traits to leaf and habitus, plant high
 3. Phenological traits to ear emergence and flowering time,
 4. Pest and disease susceptibility.

Characterization and evaluation of PGR



Decision which descriptors and varieties



Suggestion 5 to 10 descriptors for C-data

- **Development of plants:** before/after winter, growing in spring as tillering capacity (1 very few tillers, 9 very numerous tillers)
- Winter damage: 1 very low, 9 very high
- Vegetative growth habit: 1 erect, 9 prostrate
- Plant high (Minimum/ Maximum in cm)

- **Phenology:** ear emergence (date, in days after first of April)
- Flowering time (first, 50% of plants, in days after first of April)

- **Disease susceptibility:** rust, mildew, virus (1 very low, 9 very high) in case of occurrence

Suggestions reference varieties

- UPOV list, Bundessortenamt, other country list?
- For each species like Lolium, Dactylis, Festuca, Poa, Phleum
- Each with 3 reference varieties, with variation in some/most important traits
- Additional local varieties?
- **Suggestions: 3-5** varieties per species

Reference varieties (IPK since 2015)

Species	Maturity group	Name	Breeder	Release	Emergence	Days after first of April	Acc.-No.
Lolium p.	Very early	Artesia	STEINACH	2007		1 30	GR 13012/orig
	Medium	Fennema	NPZ	1987		5 52	GR 2767/1986a
	Very late	Barnhem	Barenbrug	1999		9 67	GR 13006/orig
Festuca p.	Medium	Liherold	DSV	2005		3 42	GR 13019/orig
		Cosmolit	STEINACH	1993		4 45	GR 13010/orig
Dactylis g.	Early	Trerano	Feldsaaten Freu	1995		2 36	GR 13016/orig
	Medium	Lidacta	DSV	1982		4 42	GR 874/1990b
	Medium to late	Lidaglo	DSV	1987		7 50	GR 875/1993
Phleum p.	Early	Tiller	DLF	1985		1 46	GR4044/1987a
	Early to Medium	ANJO	Freudenberger			-	GR 13017/orig
	Late	Barpenta	Barenbrug	2002		7 73	GR 13005/orig
Poa p.	Medium	Limagie	DSV	1994		5 30	GR 13020/orig
		Lato	STEINACH	1989		6 34	GR6401/2000

Conclusion and suggestions

Choice of reference varieties after several aspects:

- UPOV list for species and traits
- Countries list, same varieties are used as example varieties
- Or ???

At the end...

Thank you for your attention!

