Grassland restoration projects in the BNPD – increasing need for grassland restoration in nature conservation

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„*Grassland restoration, seedling workshop*"

– Hortobágy 09.04.2015

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Outline

- Forested national park ⇒ why manage the grasslands?
- Grassland restoration projects, lowland vs. montane grassland management
- Seed sowing propagation (OP examples)
- Future hints

Basic facts of Bükk NP:

- est. 1977 (1st forested)
- 43.168 hectars
- 94% forest & 3,3% grassland, 0,4% arable land
- only 3 settlenments within, thus 21 settlemets overlap

Tasks:

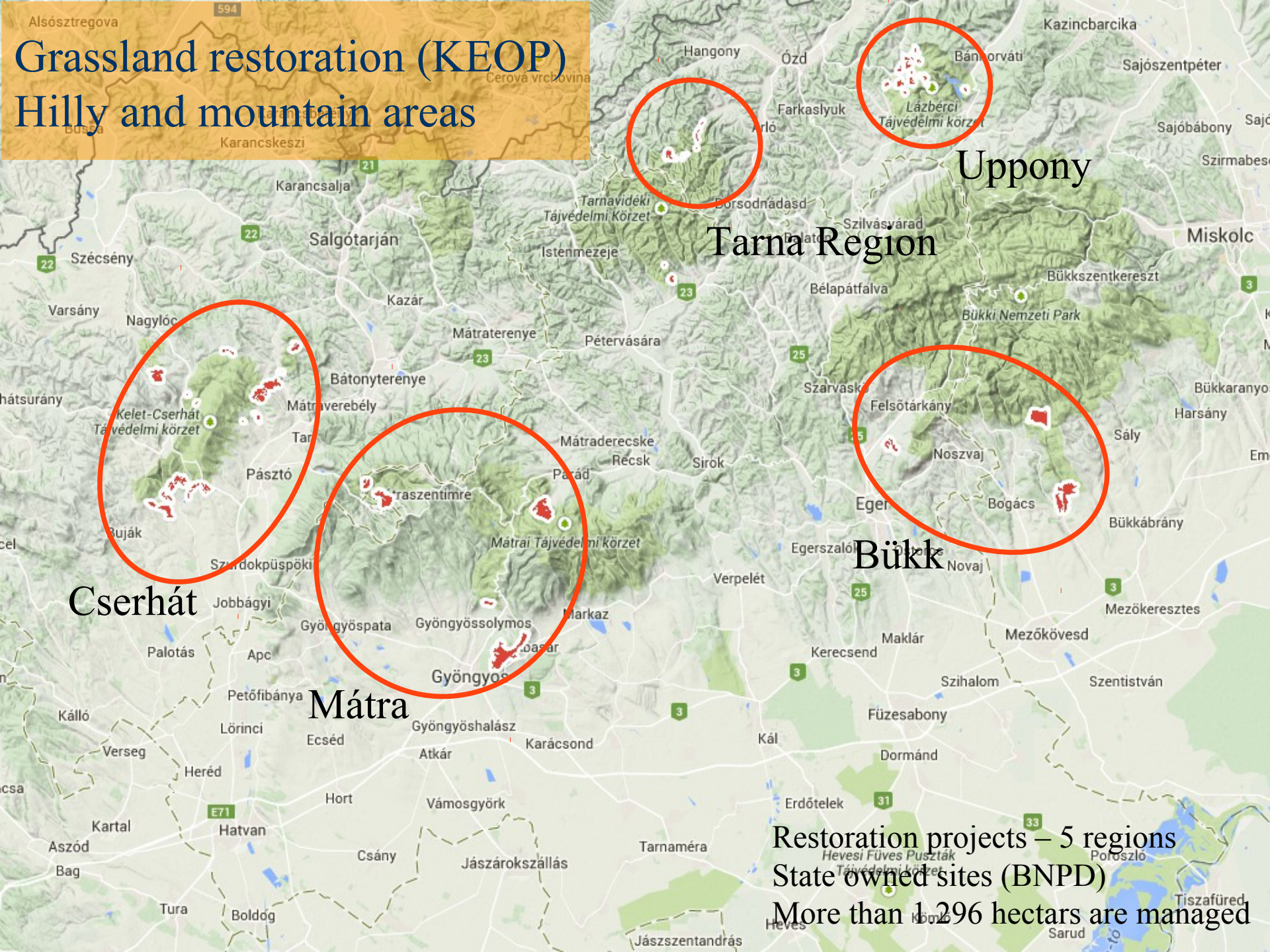
- To protect the typical and varied landscape features and the natural assets: *Rock formations, caves, dolines, springs and other water bodies; **Mountain meadows and pastures rich in Carpathian floristic elements*, typical and rare forest types, as well as indigenous plant communities and animal species.

Grassland habitats

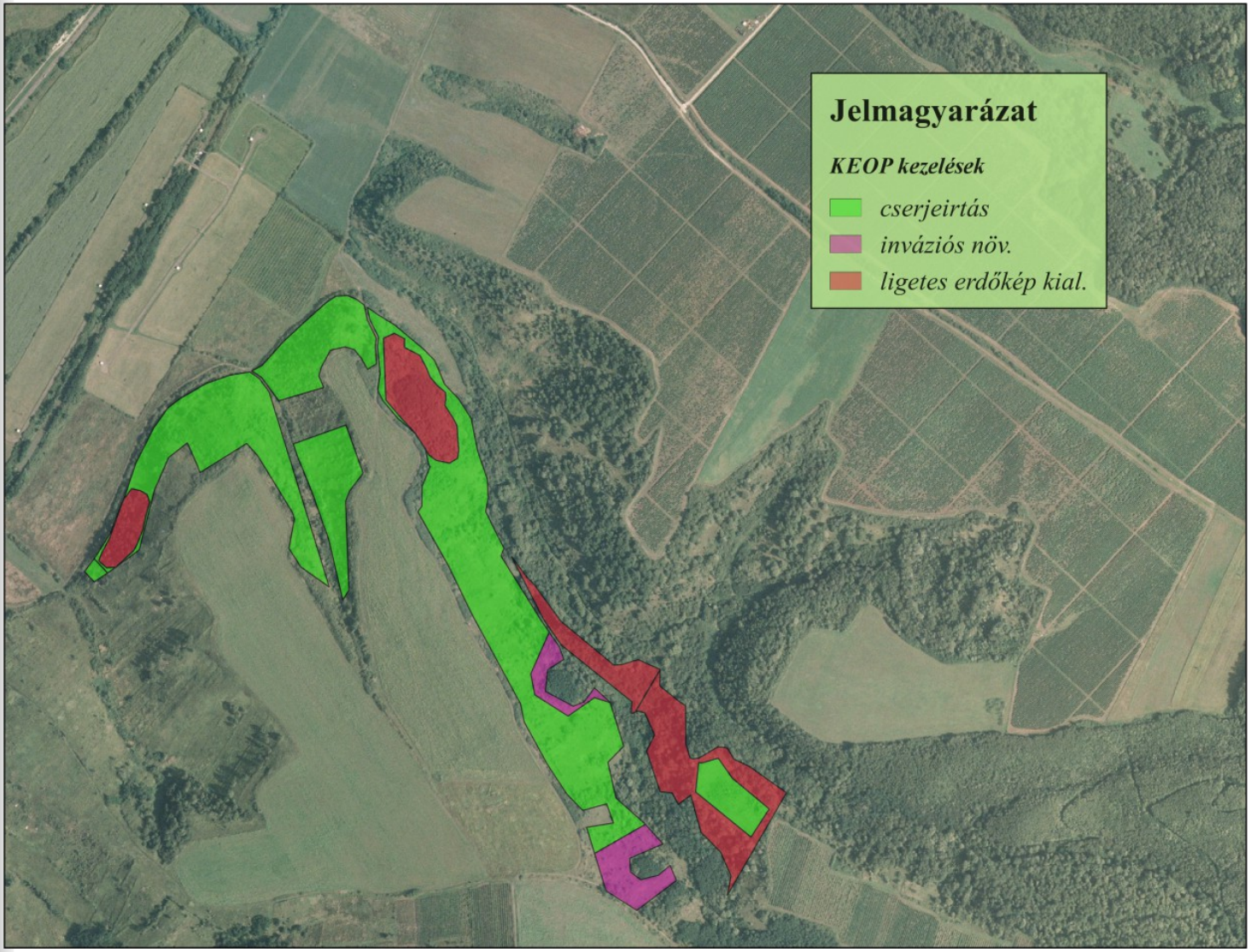
- occur in a broad spectra from mountain hayfields (6510) to alkalic steppes (1530) due to the terrain differences
- on the foothills the target habitats are steppe grasslands and semi-dry grasslands (esp. Bükk, Mátra, Cserhát, Heves-Borsod Hills)
- main threads: succession and scrub encrouchment

- Mass extent of lowland grasslands – low productivity & traditional landuse (grazing, mowing)
- Majority of lands is managed via land leasing (external farmers)
- Minority of lands is managed by BNPD (allow more nature conservation possibilities)

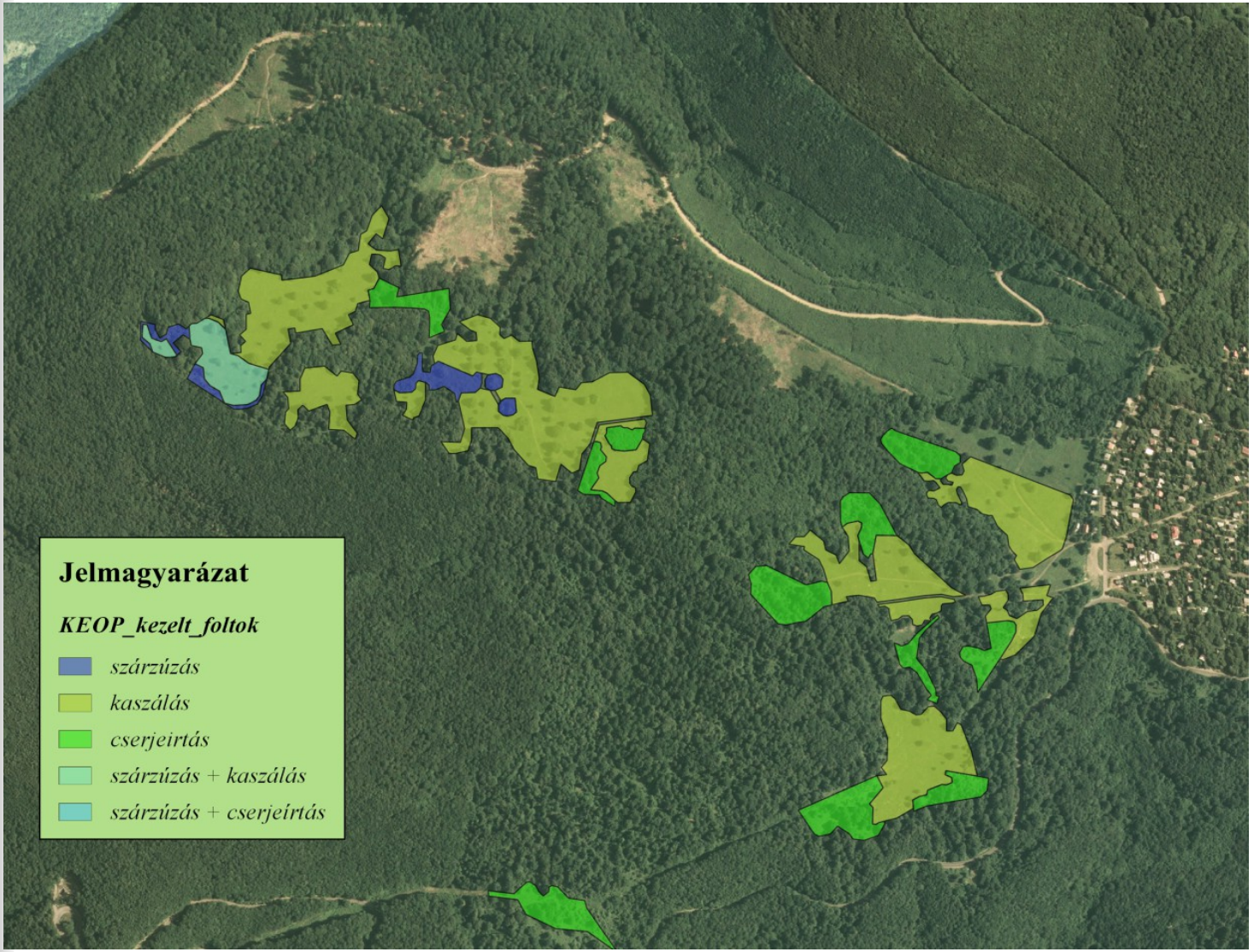
Lowland grassland	vs.	**Mountain grassland**
	EXTENT	
Greater (10 ha>)		Lower (>0.1 ha)
	STRUCTURE	
More homogenious (main vegetation type, alkalic vegetation complexes) Surrounded by agricultural land. Lower biomass.		More heterogenious (forest-steppe vegetation: wooded, shrubby, grassy patches) Surrounded by forests. Higher biomass.
	SUCCESSION	
Slower, mostly species composition changes (e.g. *Agropyron repens*)		Rather quick (1-3 years is enough for the woody vegetation to recover)
	MAIN THREADS	
Abandonment, hydoe-cological changes (e.g. drying out, alkalisation)		Abandonment, shrub encrouchment + invasive species + game species
	SCIENTIFIC KNOWLEDGE	
More studied 		Less studied 


Grassland restoration (KEOP)
Hilly and mountain areas
Uppony
Tarna Region
Bükk
Cserhát
Mátra
Restoration projects – 5 regions
State owned sites (BNPD)
More than 1.296 hectars are managed

Grassland restoration (KEOP) – example I. (Eger)



Grassland restoration (KEOP) – example II. (Parád)



Some general conclusions

- The KEOP projects should be regarded as a „*kick off*" → the efficiency without post-managment is rather poor
- Localities with older management history are much more successful (e.g. Tard: from 1998)
- Localities with smaller management parcels and mixed measures are more successful
- External factors are also be considered, such as game pressure and spontaneous and direct fires
- The scientic knowledge should be increased (less empirical, more evidence and site based)

External (extreme?) factors

Can not be planned…

Grassland restoration (KEOP) – seed propagation

Permission tasks:
e.g. seed sowing at landfills, former mining areas, along trafic lines, etc. (mostly before 2005)

Direct nature conservation tasks:
e.g. arable land conversion, restoration of archeological sites, earthworks, kurgans

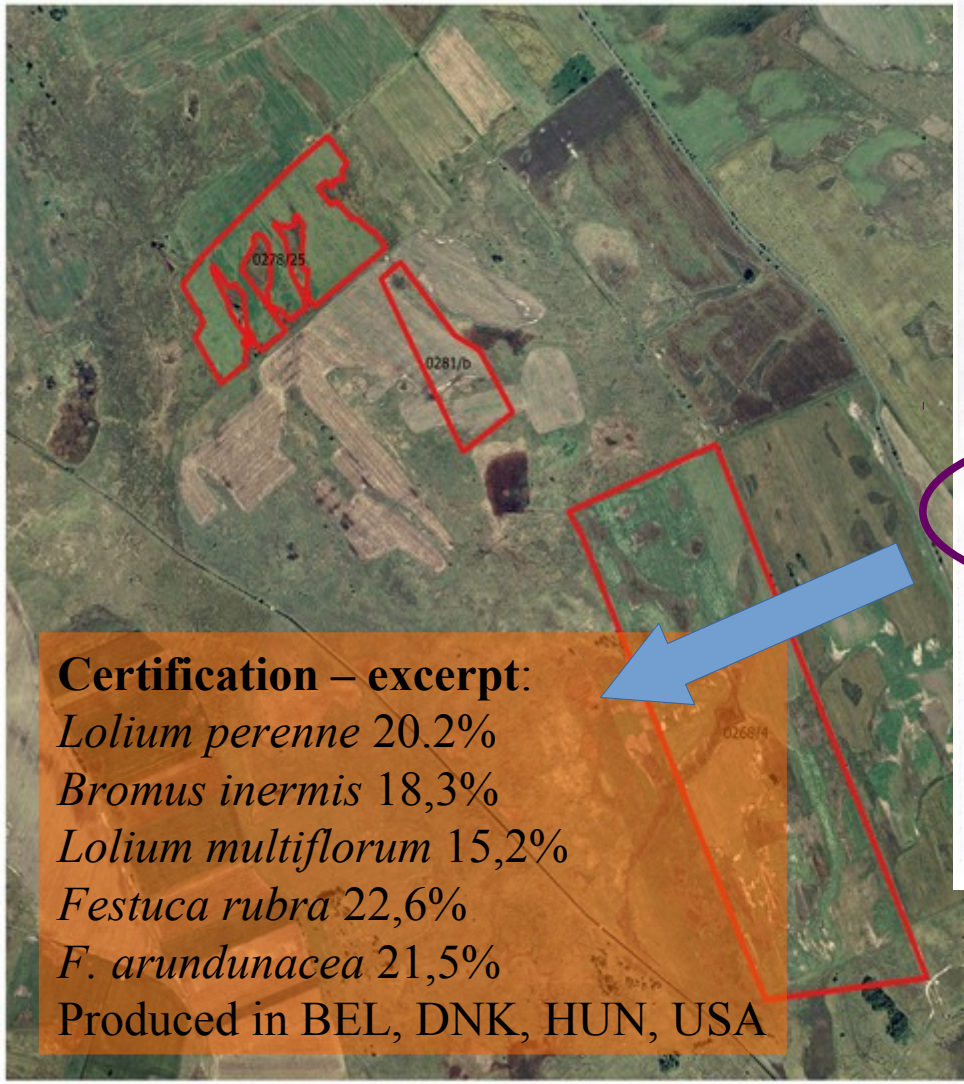
Dormánd

Grassland restoration

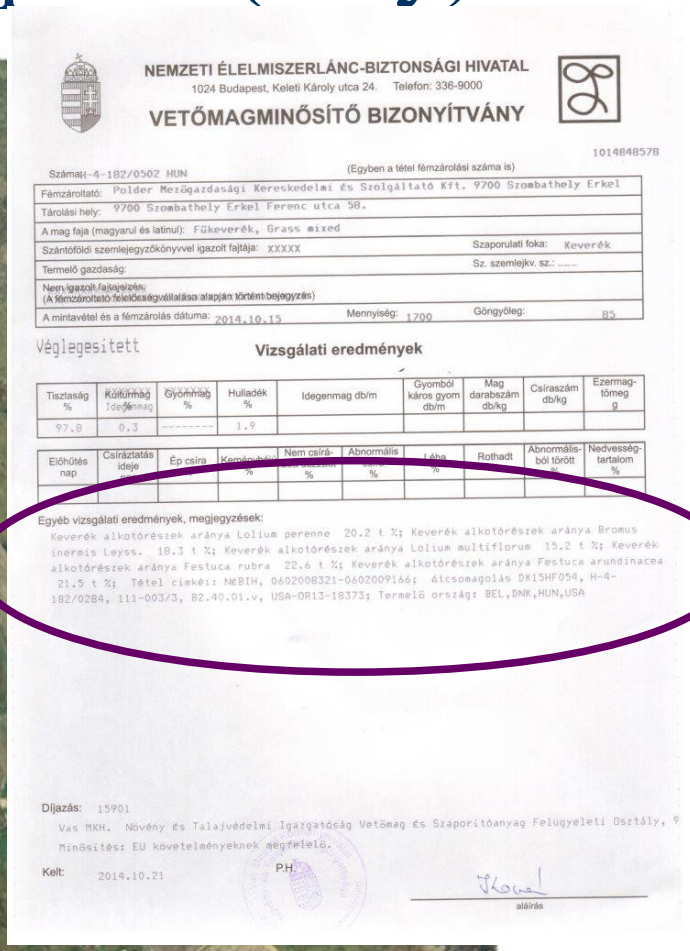
Seed sowing techniques in hilly and mountain areas

Grassland restoration (KEOP) – seed sowing example I. (Pély)

Grassland restoration (KEOP) – seed sowing example I. (Pély)



Certification – excerpt:
Lolium perenne 20.2%
Bromus inermis 18,3%
Lolium multiflorum 15,2%
Festuca rubra 22,6%
F. arundunacea 21,5%
Produced in BEL, DNK, HUN, USA



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VETŐMAGMINŐSÍTŐ BIZONYÍTVÁNY

1014848578

Száma: H-4-182/0502 HUN (Egyben a tétel fémzárolási száma is)

Fémzároltató: Polder Mezőgazdasági Kereskedelmi és Szolgáltató Kft. 9700 Szombathely Erkel
Tárolási hely: 9700 Szombathely Erkel Ferenc utca 58.
A mag faja (magyarul és latinul): Fűkeverék, Grass mixed
Szántóföldi szemlejegyzőkönyvvel igazolt fajtája: XXXXX Szaporulati foka: Keverék
Termelő gazdaság: Sz. szemlejkv. sz.: ---
Nem igazolt fajtajelzés: (A fémzárolteto felelősségvállalása alapján történt bejegyzés)
A mintavétel és a fémzárolás dátuma: 2014.10.15 Mennyiség: 1700 Göngyöleg: 85

Véglegesített

Vizsgálati eredmények

Tisztaság %	Kultúrmag %	Gyommag %	Hulladék %	Idegenmag db/m	Gyomból káros gyom db/m	Mag darabszám db/kg	Csíraszám db/kg	Ezermagtömeg g
97.8	0.3	--------	1.9					

Előhűtés nap	Csíráztatás ideje	Ép csíra %	Kemény-héjú %	Nem csíra-képes %	Abnormális %	Lágy %	Rothadt %	Abnormálisból törött %	Nedvesség-tartalom %

Egyéb vizsgálati eredmények, megjegyzések:
Keverék alkotórészek aránya Lolium perenne 20.2 t %; Keverék alkotórészek aránya Bromus inermis Leyss. 18.3 t %; Keverék alkotórészek aránya Lolium multiflorum 15.2 t %; Keverék alkotórészek aránya Festuca rubra 22.6 t %; Keverék alkotórészek aránya Festuca arundinacea 21.5 t %; Tétel cimkéi: NEBIH, 0602008321-0602009166; Átcsomagolás DK15HF054, H-4-182/0284, 111-003/3, B2.40.01.v, USA-OR13-18373; Termelő ország: BEL,DNK,HUN,USA

Díjazás: 15901
Vas MKH. Növény és Talajvédelmi Igazgatóság Vetőmag és Szaporítóanyag Felügyeleti Osztály, 9
Minősítés: EU követelményeknek megfelelő.

Kelt: 2014.10.21 P.H.

aláírás

Grassland restoration (KEOP) – seed sowing example II. (Átány)

Abandonment of arable land:
- More successful after lucerne and cereal cultures – rapid regeneration
- More successful if additional grazing used (sheep) + extreme evaporation (e.g. 2010)

Ipolytarnóc – Fossils Visitor Center

Thank you for your attention!

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