



CENTRAL BALTIC
INTERREG IV A
PROGRAMME
2007-2013



EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND
INVESTING IN YOUR FUTURE

WP3: Work on horse pasturing

INNOEQUINE



MTT

- MTT Animal Production

Markku Saastamoinen, Susanna Särkijärvi, Marianna Myllymäki,
Tiina Reilas



UNIVERSITY OF HELSINKI

FACULTY OF AGRICULTURE AND FORESTRY

- University of Helsinki, Agricultural sciences

Irina Herzon, Cathrine Schreurs, Heljä Marjamäki

AIM

- Optimizing the stocking rate/grazing pressure on natural and semi-natural pastures
- Estimate the feeding value and nutrient intake of horses of various categories on natural pastures
- Estimate the impact of horses on the vegetation (species diversity) and ground (trampling) of natural pastures

- Collect best practices
- By the means of above to improve the knowledge on pasturing of horses:
 - to maintain the nature values of pastures (vegetation types for foraging and public goods)
 - welfare and health of horses
 - safe management for both horses and people

- Estimate the suitability of natural and semi-natural pastures for horses
- Give information to policy decisions and recommendations



TASKS

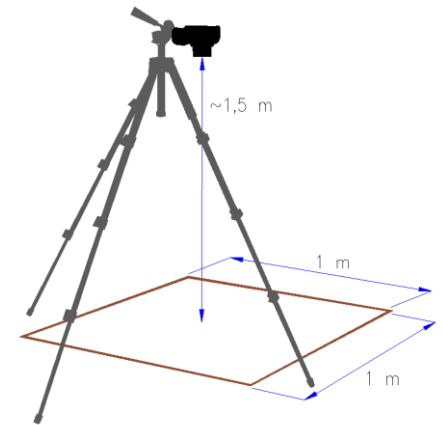
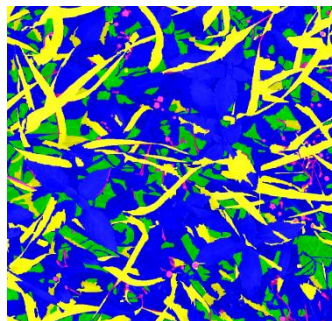
- **Collected data (summer 2012) from:**
 - Nutritional status, body weight changes of horses
 - Welfare and health data (e.g. insect bites, injuries) of horses
 - Safety issues
 - Samples of the flora and impacts of horses
 - An interview of horse owners and land owners concerning pasturing of horses (management, practical experiences etc.) – 50 respondents

- Natural (NATURA2000 areas in Ypäjä) and semi-natural pastures were used (3 different sites)
- A literature review has been conducted (about 200 references)



Fieldwork: methods

- Full area vegetation survey - once
- Vegetation sampling in squares, 3 times
- Digi-photography (structure), 3 times



Picture: Outi Kankaanpää

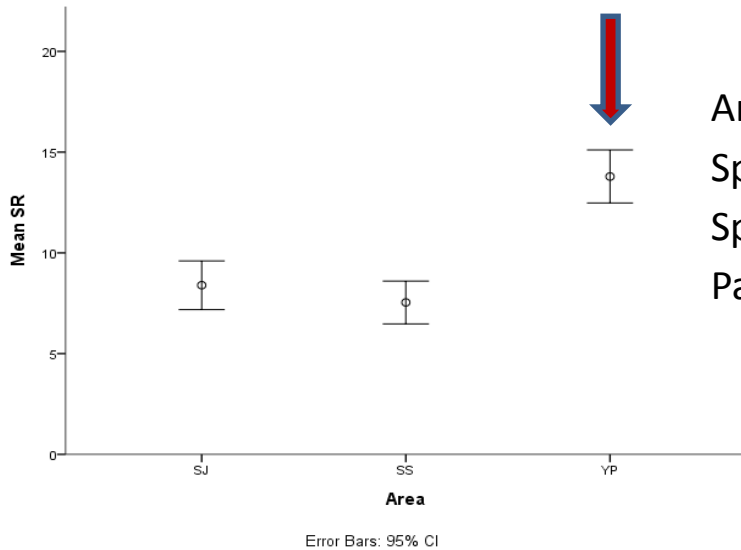
RESULTS: Interviews

- Benefits to the animals – top reason: gradual foraging and moving, more and varied exercise, healthy digestive system, less behavior problems, socializing in a herd,
- Also to the owners (ease on the owner's workload), and ...
- To the environment (landscape, use of resources).

- The most frequently mentioned challenges: insects and weeds (that is, plants unpalatable to horses).
- Most desirable information: establishing and managing pastures, suitable types, sown and native species, benefits from pastures (esp. to urban people).

Everyone with a possibility to graze was satisfied.

RESULTS: Diversity



Area	Ypäjä	Savijärvi	Särkisaari
Species Richness Squares	116	48	40
Species Richness Survey	155	121	137
Pasture Species Richness	135	106	96

In Ypäjä, the highest biological diversity in all three areas and a high variation among the parcels (from 20 to 80 species per sample square)

RESULTS: Grazing

All grasses and clovers – clear preference

Also eaten:

- *Deschampsia cespitosa* (tafted hair-grass) – but not enough to keep it from becoming dominant (mainly wet places)
Agrostis capillaris (coach grass) - but not enough to keep it from becoming dominant (only in dry places)
- *Achillea millefolium* (milfoil)
- *Taraxacum sp* (dandelion)

+ 11 more native species

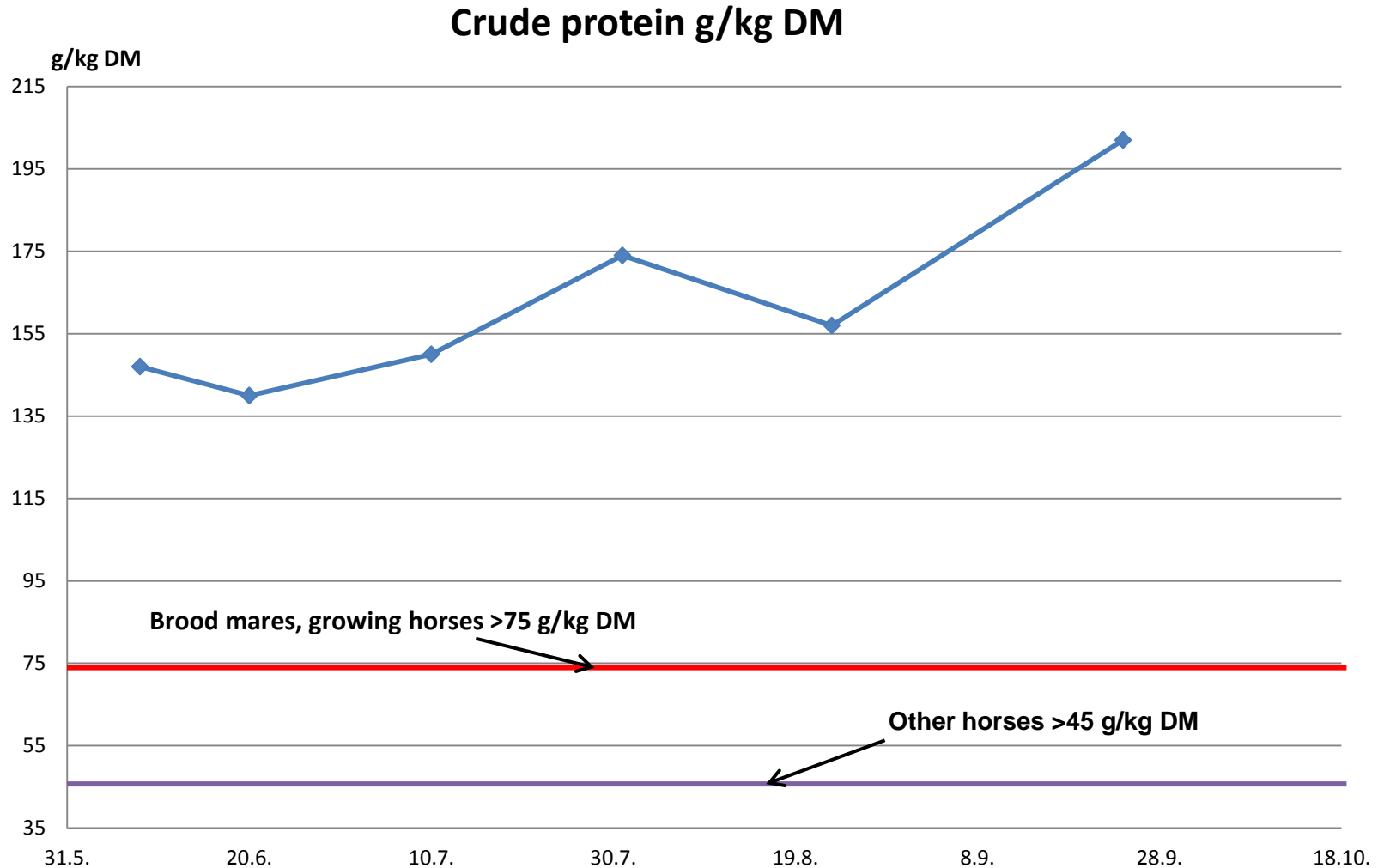
RESULTS: Welfare and health

- No large weight changes, mainly increased weight
- Only small scratches
- Few insect bites

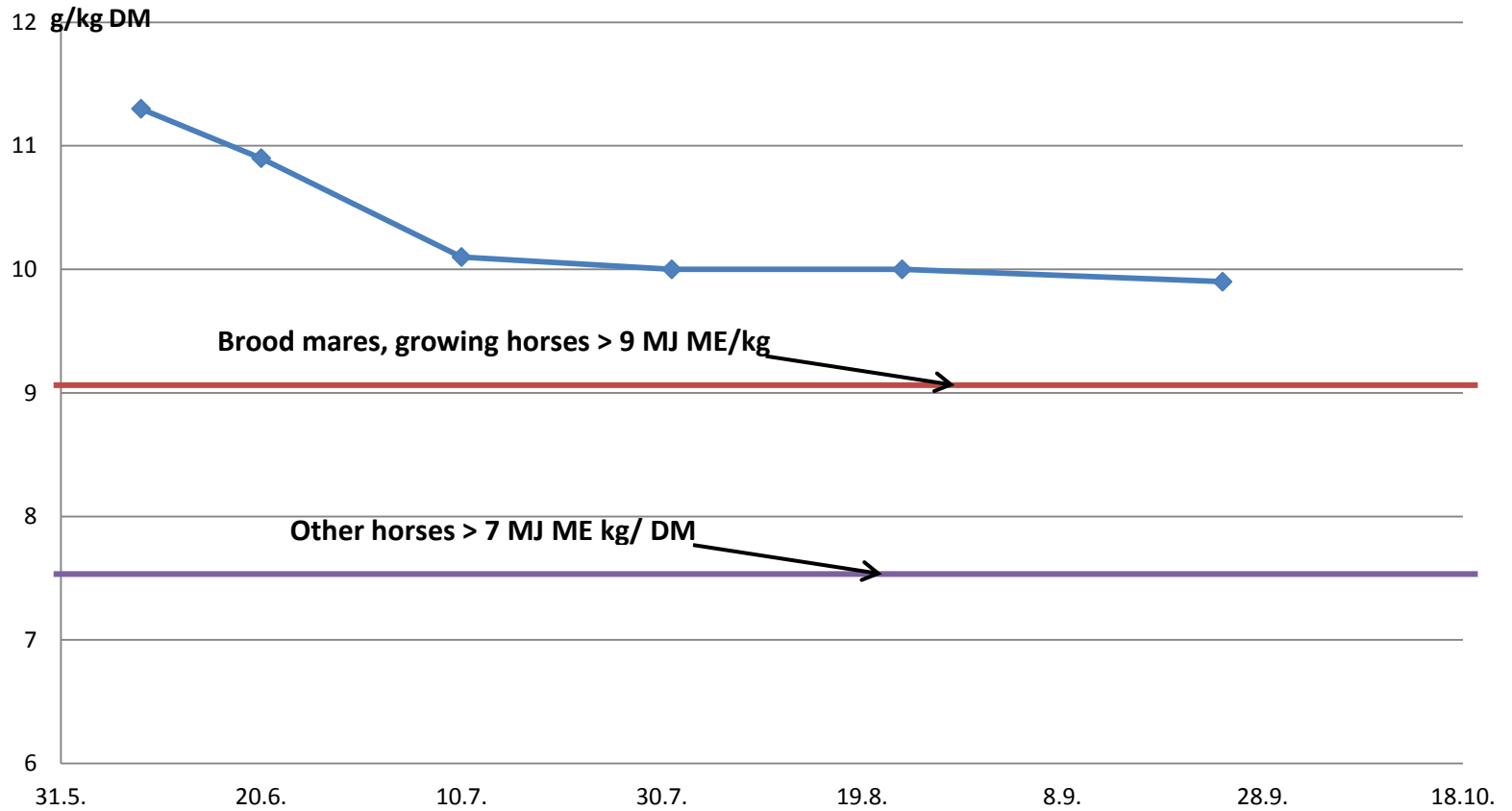


Portable stock

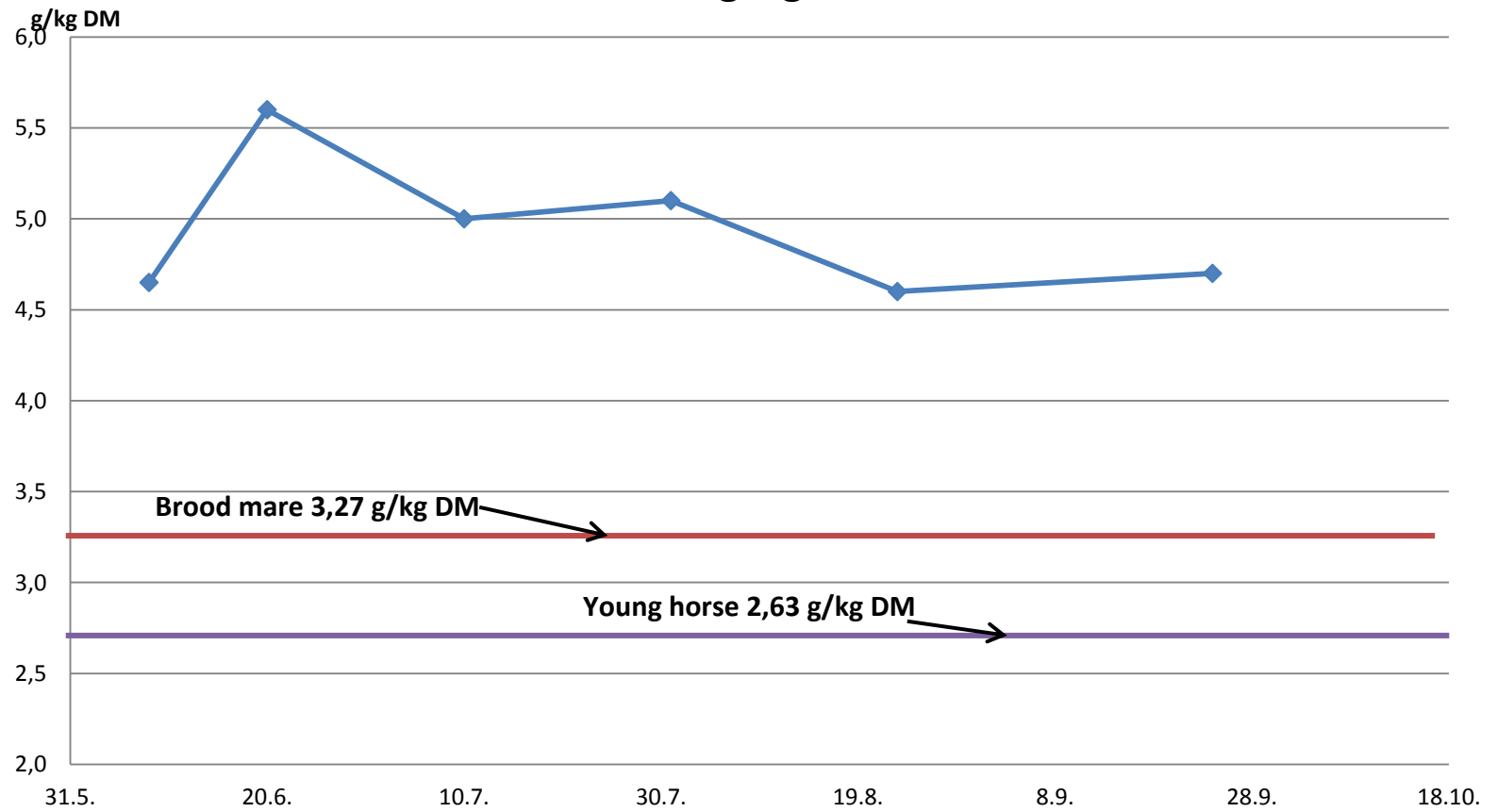
RESULTS: Feed values



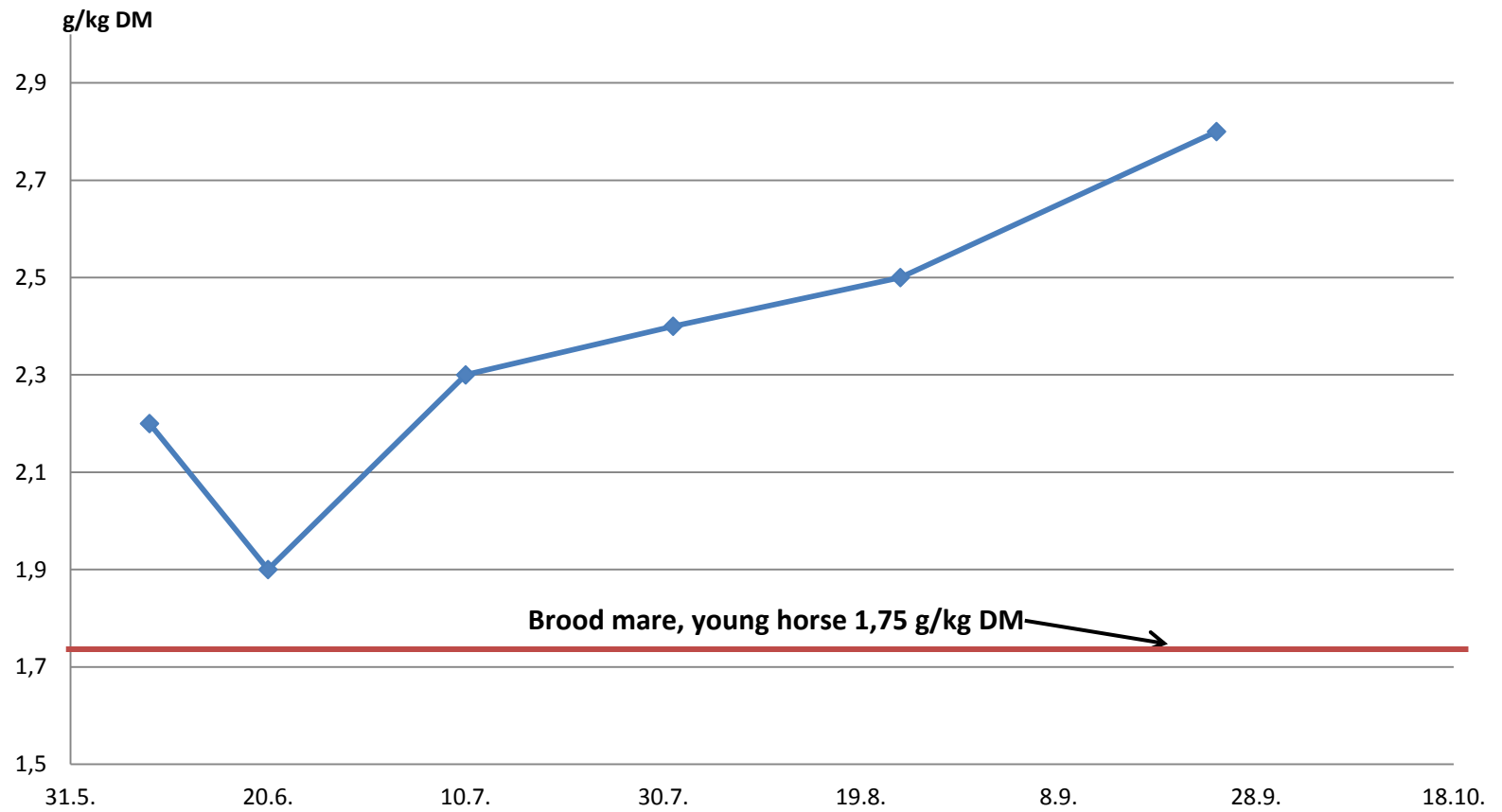
Energy value MJ/kg DM



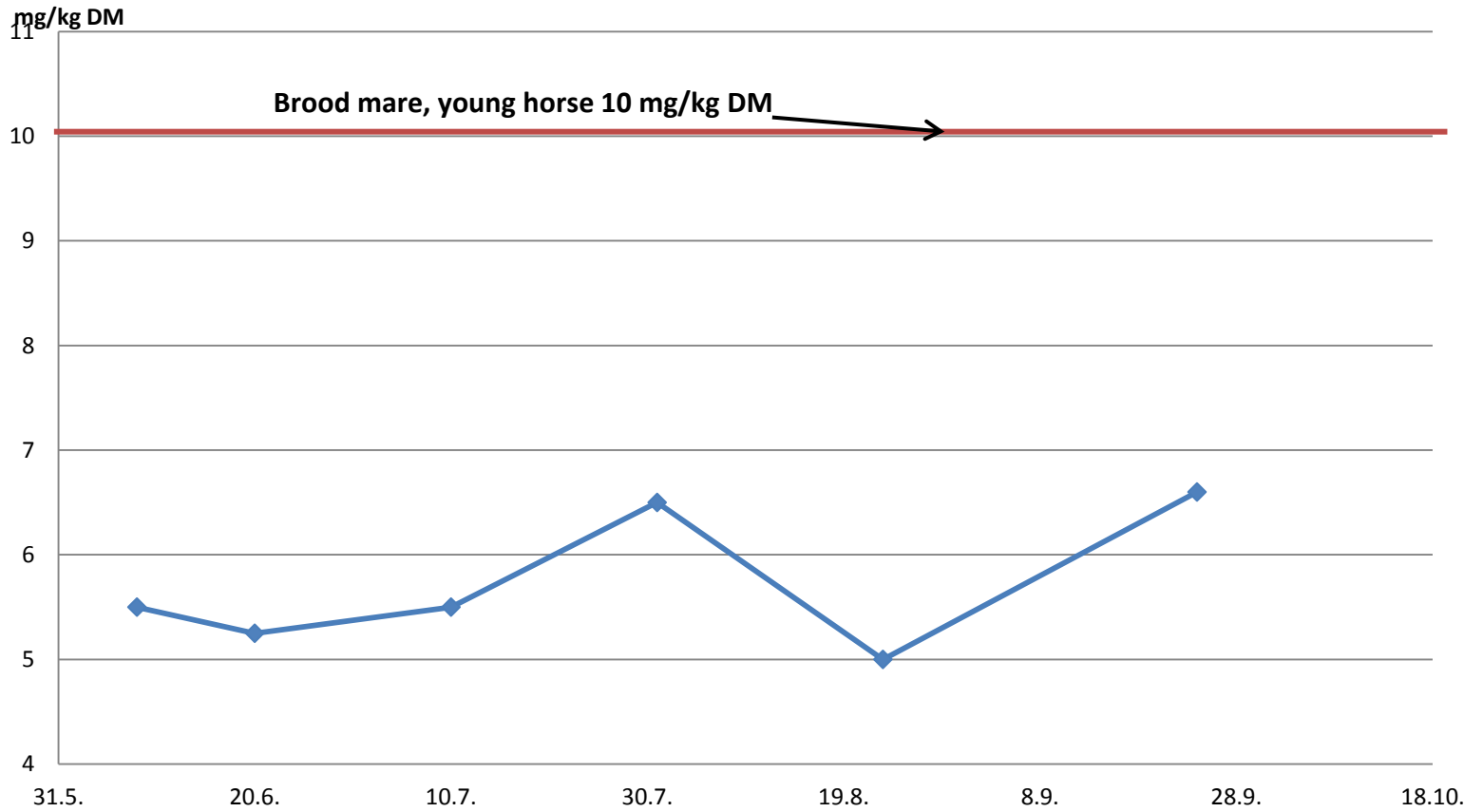
Calcium Ca g/kg DM



Phosphorus P g/kg DM



Copper Cu mg/kg DM



Ypäjä



Management has to be diversified: mechanic clearing or by sheep/goats

Särkisaari



Partly unsuccessful conversion of permanent pasture into sown
Island pasture is difficult to manage efficiently as a sown
pasture

Savijärvi



Resolving a trade-off through non-grazed elements

FUTURE WORK

- Data processing and analysing is continuing
- Evaluation feed values, nutrient intakes and nutrient balances
- **Demo course** on pasturing of horses has been planned (Finland, Estonia)
- Web-tool on best practices



- **A guidebook on grazing of horses on natural pastures** (pasture and horse management; impact and benefits for biodiversity etc.) under editing (separate project)
- Some studies will be continued in summer 2013 based on the results and experiences from the summer 2012

