



REVIEW: DM LOSSES ON GRASS AND FORAGE PLANT PRODUCTS IN THE PHASES HARVEST, CONSERVATION, STORAGE, FEEDOUT AND INTAKE

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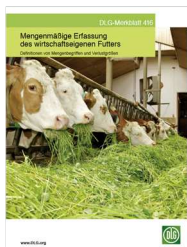
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Background

- Depending on the type of preservation, environmental conditions and how processes are controlled, there are varying degrees of quantitative and qualitative changes in the course of harvesting, preservation, storage and feed out phase, particularly in the form of losses of DM, energy and nutrients.
- The aim of forage conservation is to allow losses only to an unavoidable or acceptable extent.

Conclusions

- Environmental and management factors are part of the processes
- Climate impacts/feed shortages increase importance in practice
- Raising awareness among farmers would be necessary
 - Efforts should be made to record harvest quantities
 - Utilise reserves through improving measures
- Reduction of avoidable losses as a measure of success**



DLG Fact Sheet 416

Quantitative recording of the farm's own feed
(Köhler et al. 2016)

contains:

Definitions of the mass and material flows

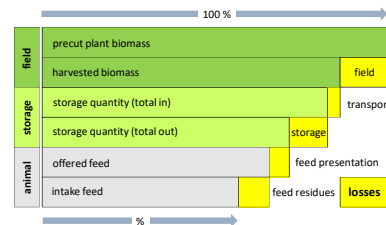
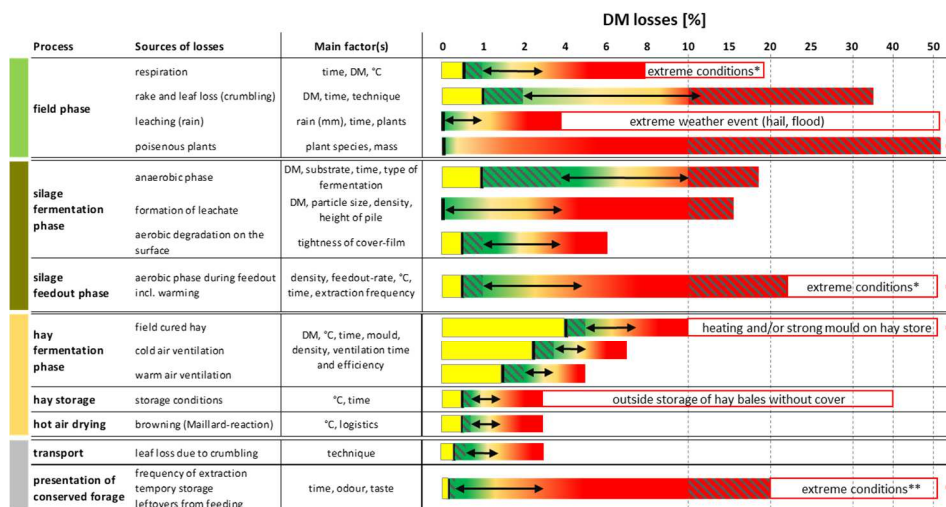
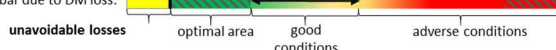


Fig. 1
Scheme for mass losses
in forage production
from plant growth to
feed intake (utilisable yield)



Explanation of colour-bar due to DM loss:



Note on scaling: Leaps in numbers due to DM losses are up to 10% smaller for a better overview. ■ above 10% leaps of numbers become larger.

*Extreme conditions: **Respiration**: wet-hot weather; **Silage-warming**: strong heating resp. rain entry and putrefaction in big silos without covering

**Extremes due to forage presentation: strong feed selection resp. refusal to feed; i.E. of ester-odour in silages

Fig. 2: DM losses of forage from field to feeding table depending on processes, sources of losses and other influencing factors

Example

Range of DM losses in case of DM-yield
8.5 t DM/ha (precut plant biomass)

Grass silage

Stage	DM losses %	Utilisable yield t DM/ha
optimal	< 10	> 7.7
average	15 to 20	6.8 to 7.2
suboptimal	> 30	< 6.0



Field cured hay

Stage	DM losses %	Utilisable yield t DM/ha
optimal	< 16	> 7.1
average	25 to 30	6.0 to 6.4
suboptimal	> 40	< 5.1



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