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systemanalyse milch

Dairy Production: Grazing vs. Indoors

A Systems Analysis in Lower-Saxony/Germany

(SAM – System Analysis Milk)

Universität Göttingen (Spokesman)
Grünlandzentrum (Coordination)
TiHo Hannover
Fachhochschule Hannover
FLI Braunschweig
Landwirtschaftskammer Nds.
Dairy farms

Funded by MWK/Hannover

systemanalyse-milch.de

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Franz Marc

Funded by MWK/Hannover

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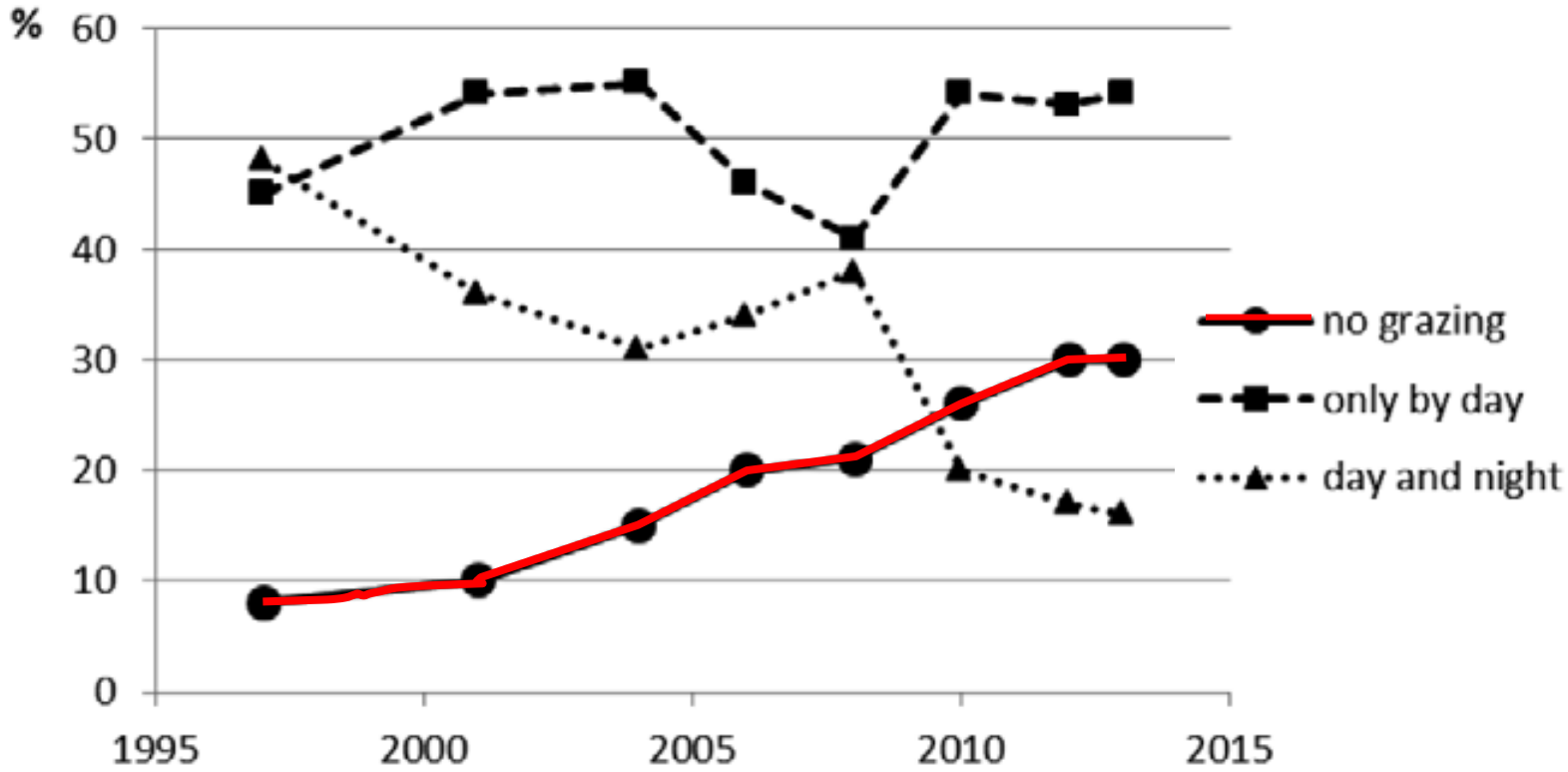

Grazing of dairy cows in the Netherlands; Data as percent of all dairy cows (Schukking & Van den Berg 2015)

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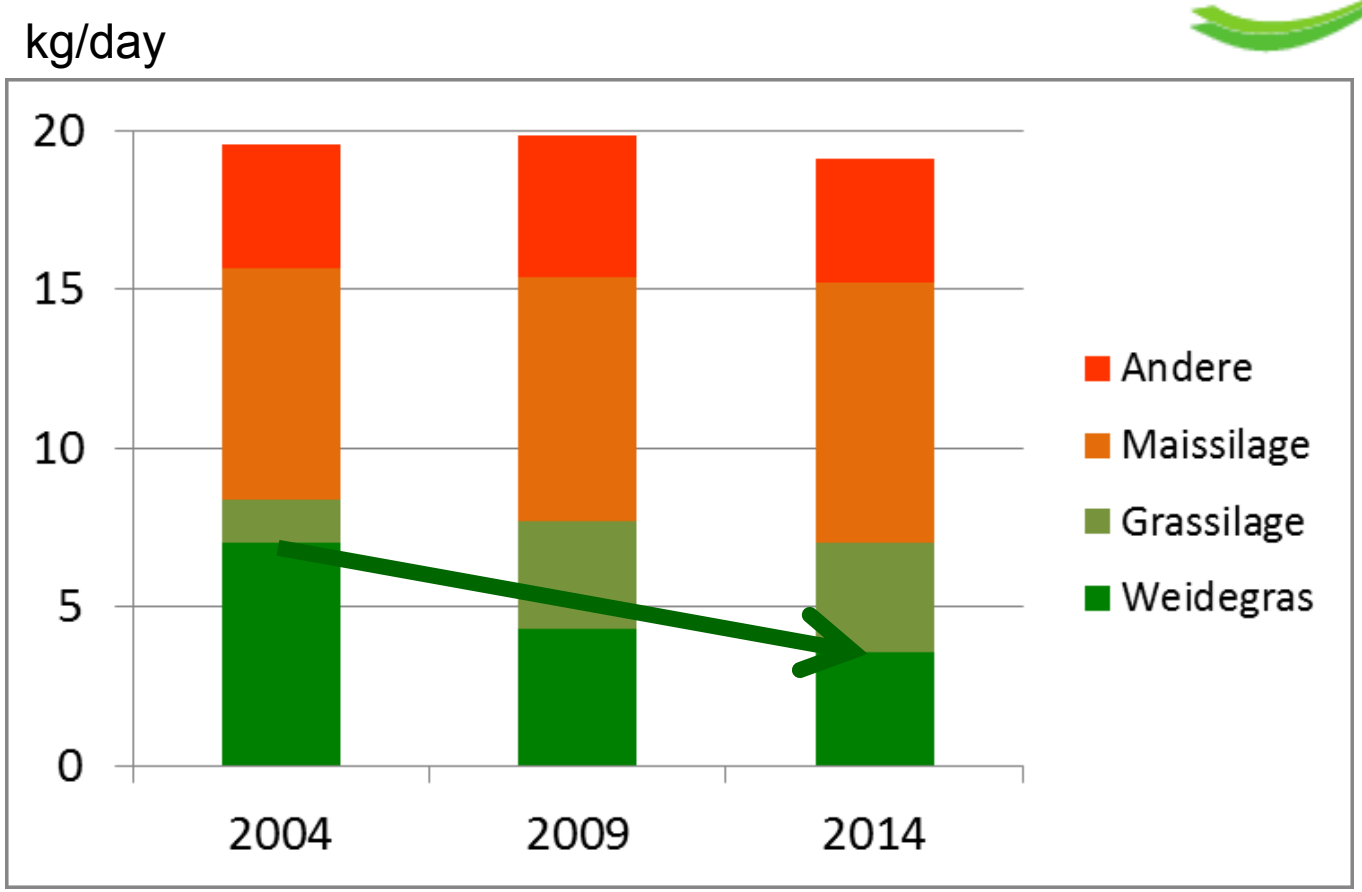
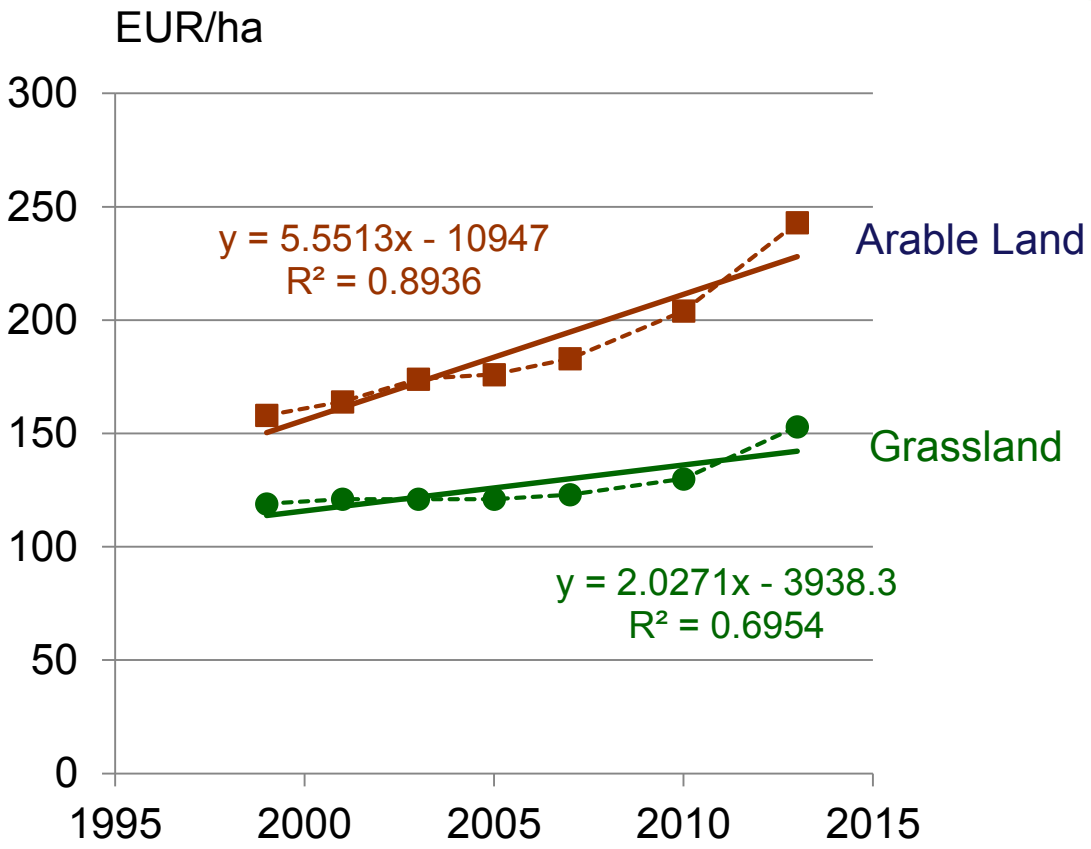


Development of the feed rations for dairy cows during the summer of the 20% best performing dairy farms in Vlanders/Belgium

(van den Pol-van Dasselaar et al. 2015)



Development of land prices for arable and grassland in Germany (destatis 2016)

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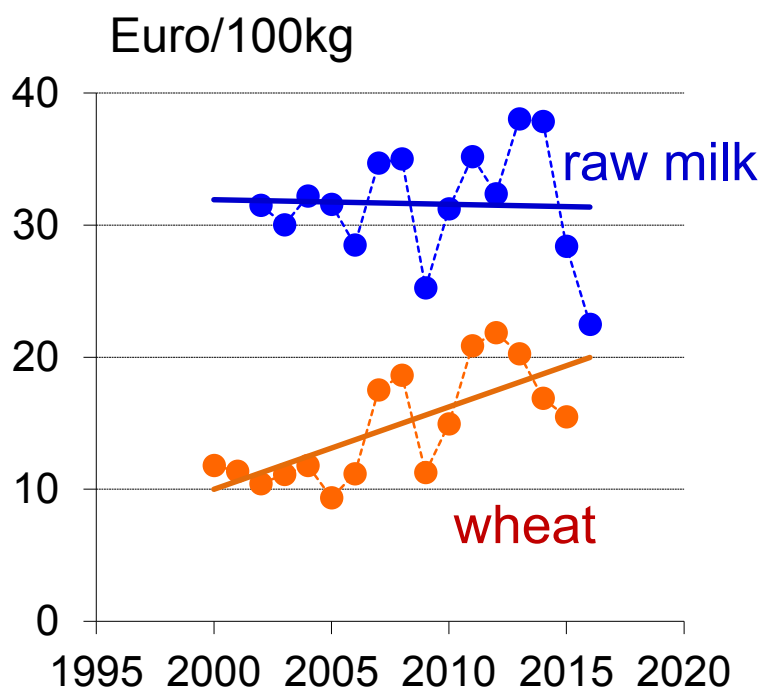

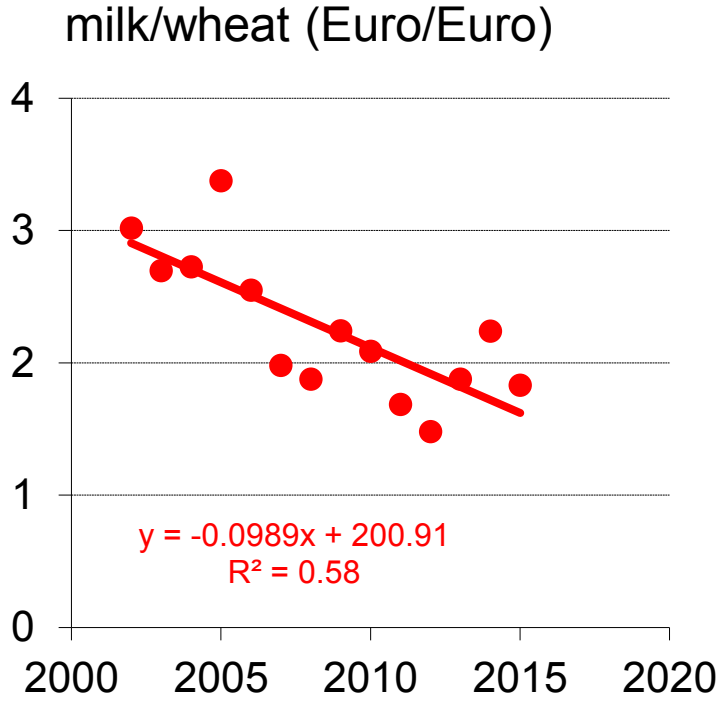

Entwicklung der Erzeugerpreise für Rohmilch und Weizen in Deutschland und Verhältnis von Milcherlös zu Weizenpreis (eurostat 2016)

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Sources of energy supply of dairy cows in Germany, based on different estimation procedures in Germany

	Estimation method	
Forage	**potential**	**residual**
Grass	43 %	30 %
Maize	28 %	34 %
Concentrates	29 %	36 %

Ortgies 2017, unpublished

Estimation method

- potential: from official census data
- residual: back calculation from energy requirements and concentrate feeding

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SAM – Structure of a collaborative endeaver

A fully transdisciplinary Approach

- Science (multi-disciplinary)
- Extension/Administration
- Farming

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Research Areas

- Animal welfare, animal health
- Udder diseases
- Dairy nutrition
- Pasture parasites
- Forage production/Nutrient management
- Resource efficiency (LCA)
- Farm economy
- Consumer behaviour/marketing

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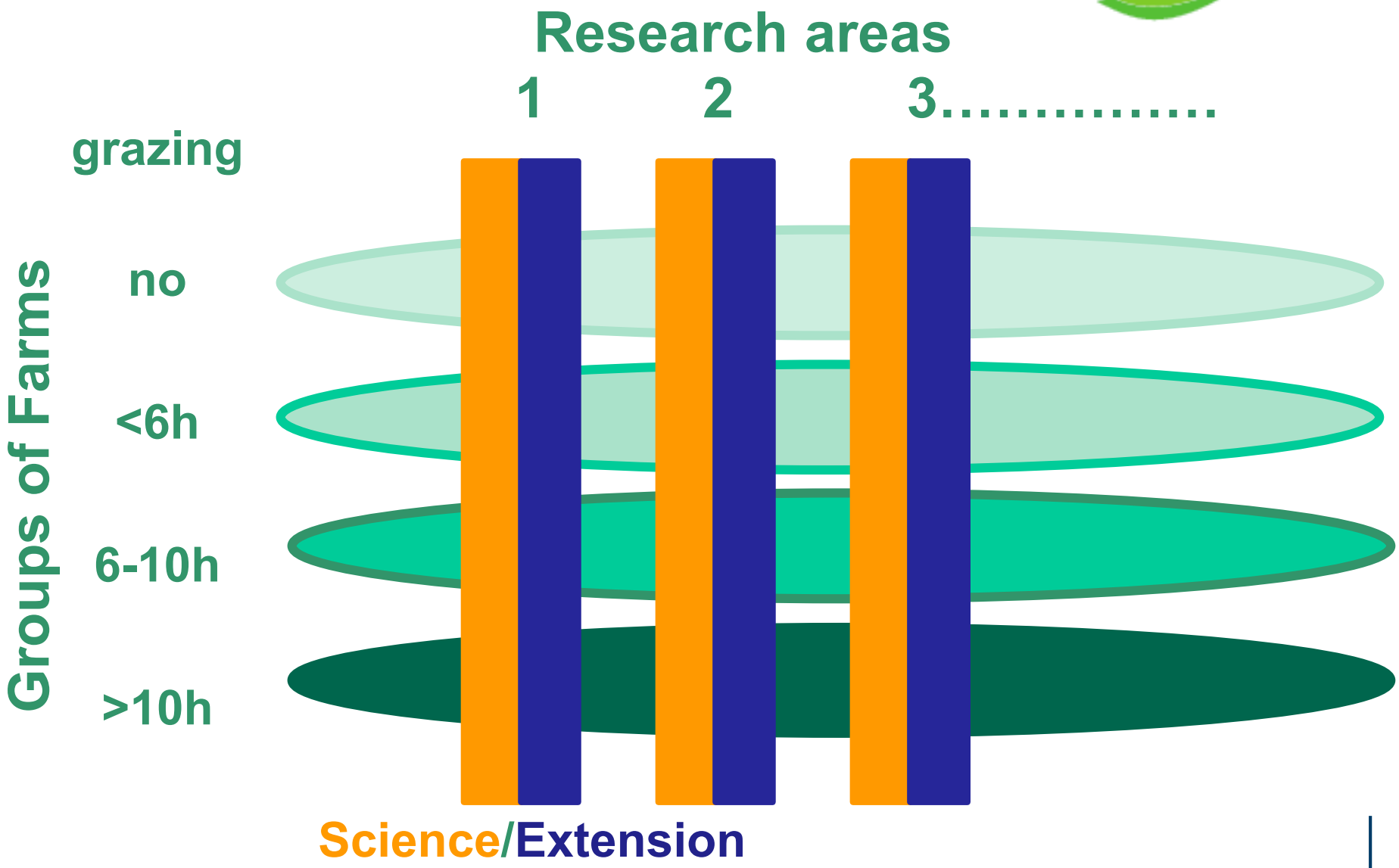

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Selected findings: grazing (in short) ↑↓

Animal health: **mainly beneficial**

Udder diseases: **general management more important**

Dairy nutrition: **awareness of transition indoor/pasture**

Pasture parasites: **less than expected**

Forage production: **potential of underutilized grasses**

Resource efficiency: **depends**

Consumers: **potential for marketing of pasture milk**

Economy: **depends**

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Apart from findings….

Results are limited to variability among farms

Preparedness of farmers variable

Transformative science is not easy…..

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