

Challenges and Benefits of Health Data Recording in the Context of Food Chain Quality, Management and Breeding a short statement



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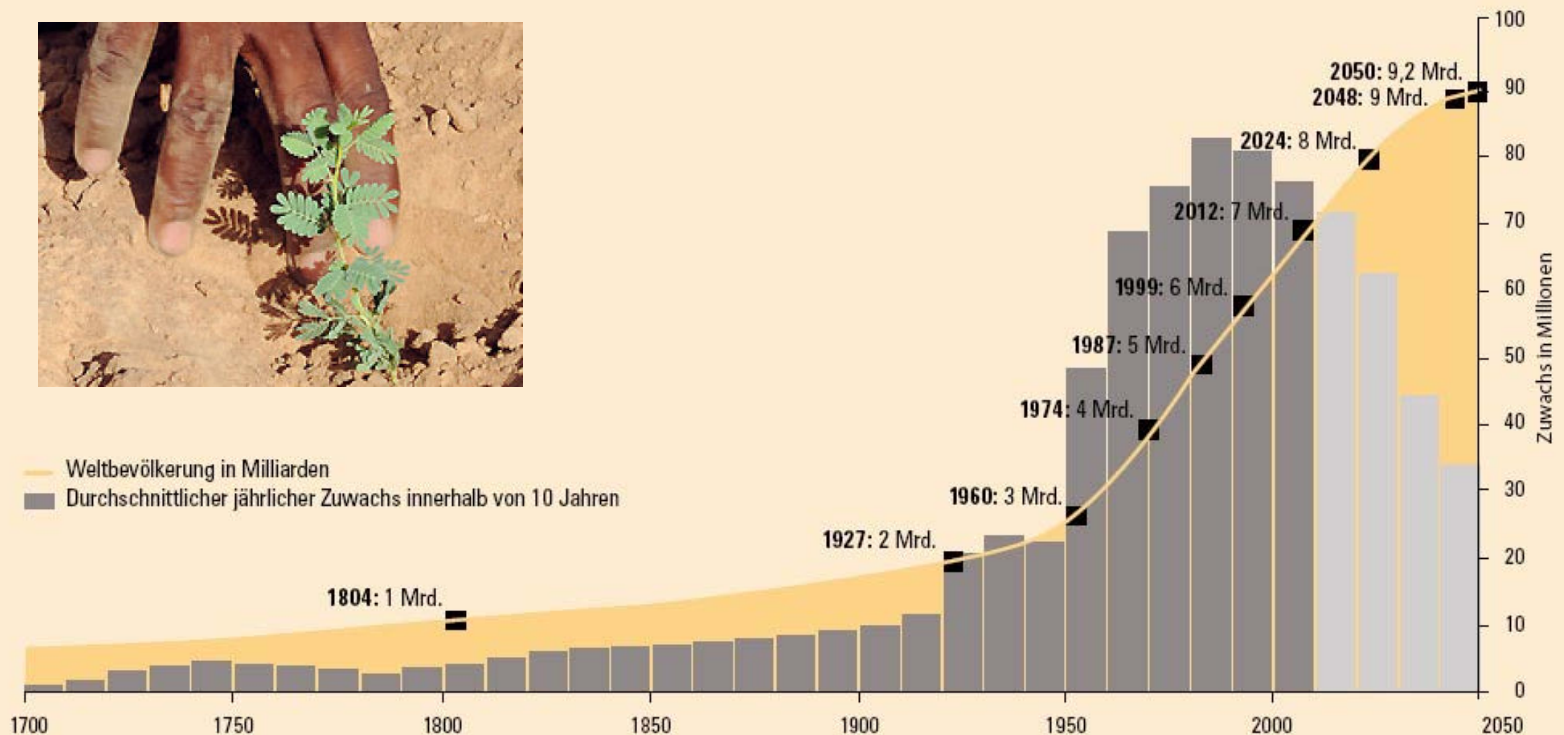
**Federal Chamber of Veterinary Surgeons





The Major Challenge

World Population Development



Grafik: Deutsche Stiftung Weltbevölkerung

Quelle: Vereinte Nationen, *World Population Prospects: The 2006 Revision*, 2007.



The Major Challenge

Productive agricultural land

1950: ca. 5.000 m² per inhabitant

2020: ca. 2.000 m² per inhabitant

Pallauf 2002

→ The key to feeding a growing population without harming wildlife habitats is research in high yield farm technics and biotechnology

Dennis Avery 1996



The Major Challenge

„Further development of already
high yielding agriculture“



Avery 1996



High Yielding Agriculture

- more complex production processes
 - using more modern technologies
 - using quality assurance programs
 - high yielding animals
 - high yielding humans

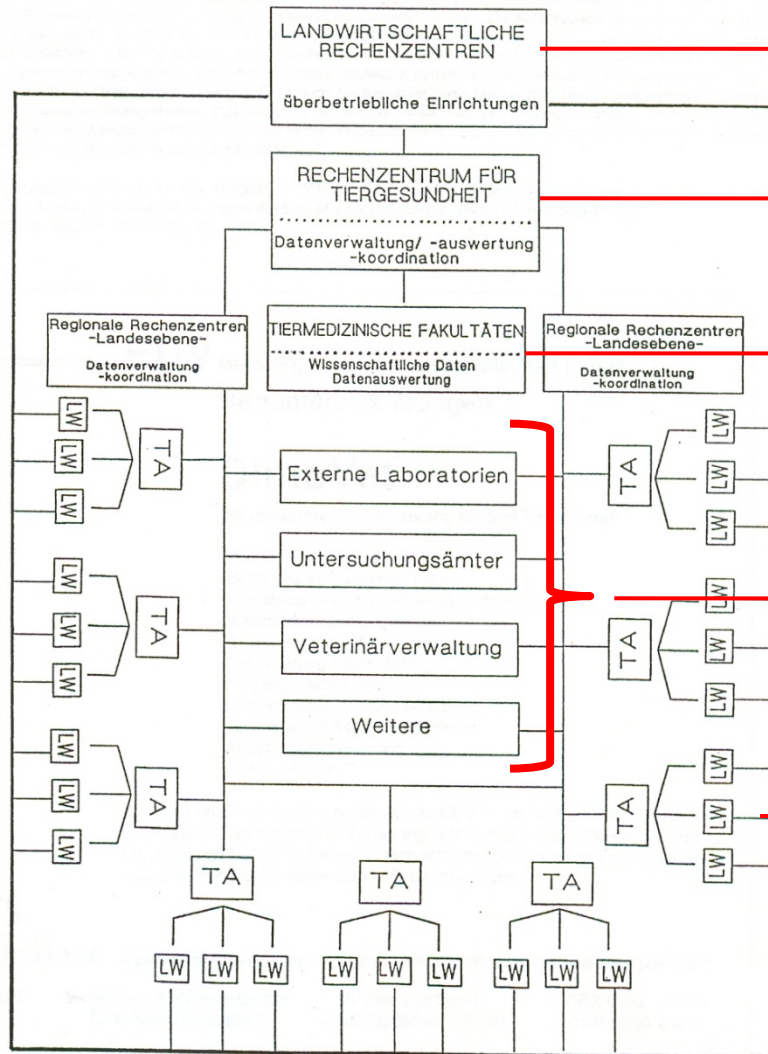


High Yielding Agriculture

- more complex production processes
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 - high yielding humans



Information Processing



Agricultural data processing centre

Animal health data processing centre

Universities

Involved institutions and public authorities

Farmers and veterinarians

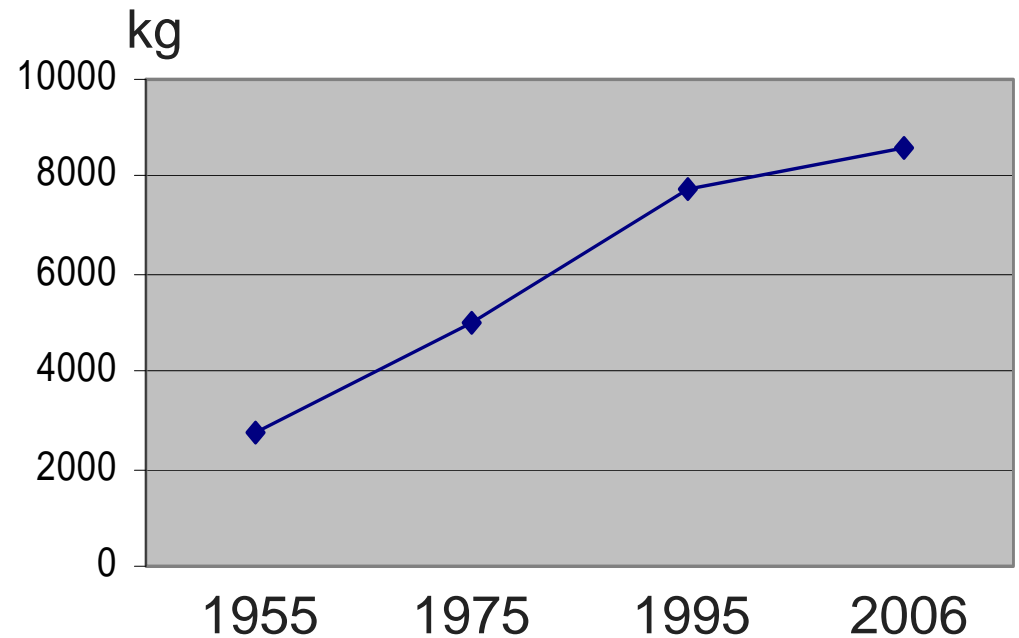


High Yielding Agriculture

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- using quality assurance programs
 - high yielding animals
 - high yielding humans



High yielding animals



Fricke 1998, VIT 2007



High yielding animals



Proportion of energy
required for maintenance (EM)
and for milk production (EP)

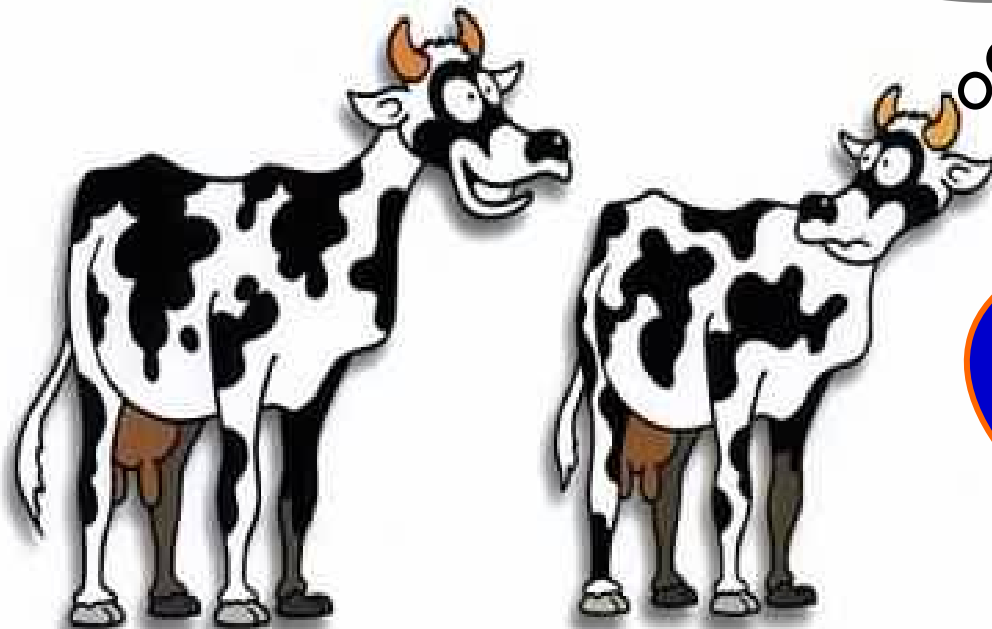
EM:EP ca. 1:3.5

Dairy cows are high performance athletes

...not only the cows
basic conditions

we are a little
demanding

???



consumer demands
legal requirements
antibiotics and other drugs
...



High Yielding Agriculture

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 - high yielding humans

farmers and veterinarians

consultants and public authorities

dairy industries and breeding organisations

veterinary scientists / epidemiologists

...



High Yielding Agriculture

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Food Chain Quality

farm level

- product quality is a result of process quality
- Process quality is a result of information/data processing
- successful data processing is a result of using key indicators reflecting animal health and performance, hygiene, biosecurity and economic aspects



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Food Chain Quality

farm level

Key indicators

- must be provided by research
 - must be evidence based
- must be available for all partners involved
 - must be used by all partners involved

Farm data

- must be available for research
- must be available for the veterinarian



Challenges for Researchers

- Epidemiological studies to get evidence based and practicable indicators for
 - risk of disease
(early warning systems, health monitoring)
 - animal welfare
(housing, environment, feeding)
- Studies to get further knowledge of genetical disposition for diseases
(genomic selection, breeding programs)



Challenges for Researchers

- Development of new management/therapy procedures based on data processing (drying off)

for all these challenges
the availability of current and
consistent data is a must 😊

for that a superior cooperation
and a clear allocation of
responsibilities are necessary



Thanks!



Quiz:



an automatic
milking system



What does this dairy operate ?