



Organic Food Quality & Health



Organic milk and nutritional benefits for the consumer

Daniel Kusche

Department for Biodynamic Agriculture

Organic Agricultural Sciences U N I K A S S E L



Organic Food Quality and Health Workshop –
“Latest Research Results on Organic Food Quality and Health”

BioFach Congress, Nuremberg, February 19th, 2009

Introduction & Background

Lötschental / High Alps (CH)



2-7

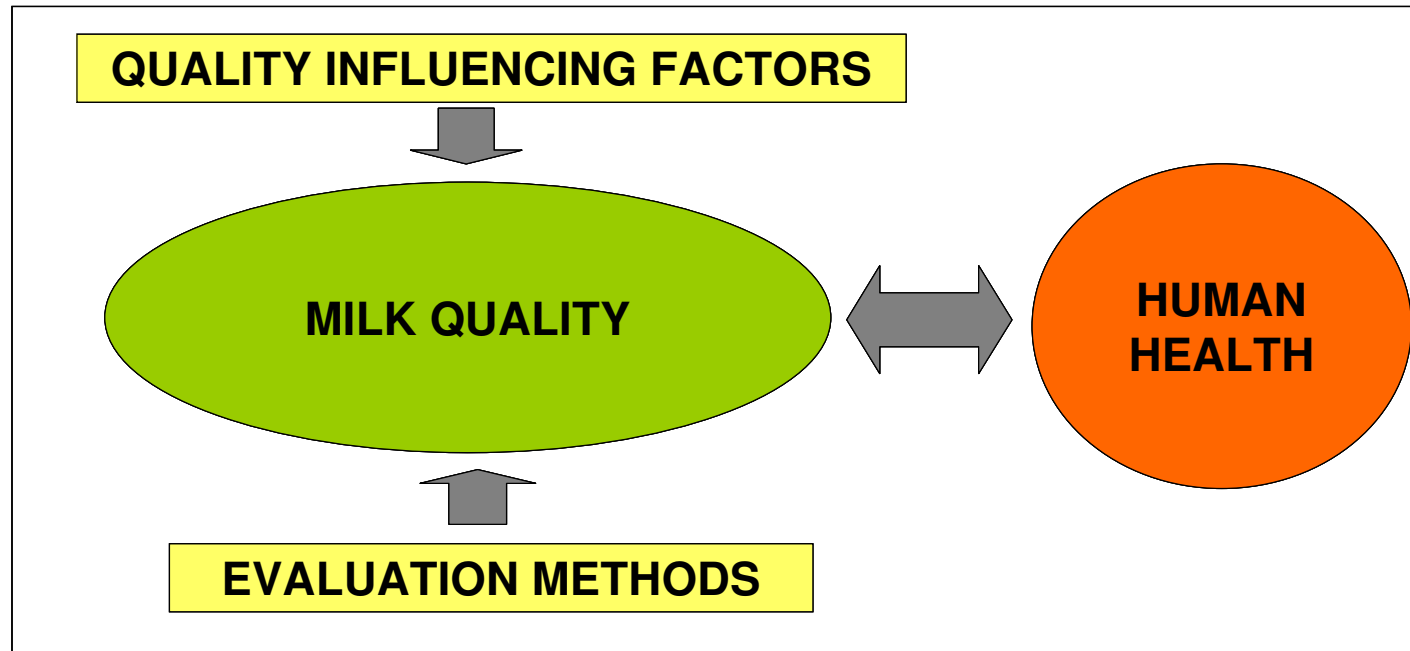


2-9



Copyright © Price-Pottinger Nutrition Foundation. All rights reserved. www.ppnf.org

Introduction & Background



- Atopic disorders have become a severe problem
- 20 to 25% in Germany

➤ Linking different research results

Allergyrisk of Children

- 3000 Children in GER, CH und AU
- survey and bloodtest



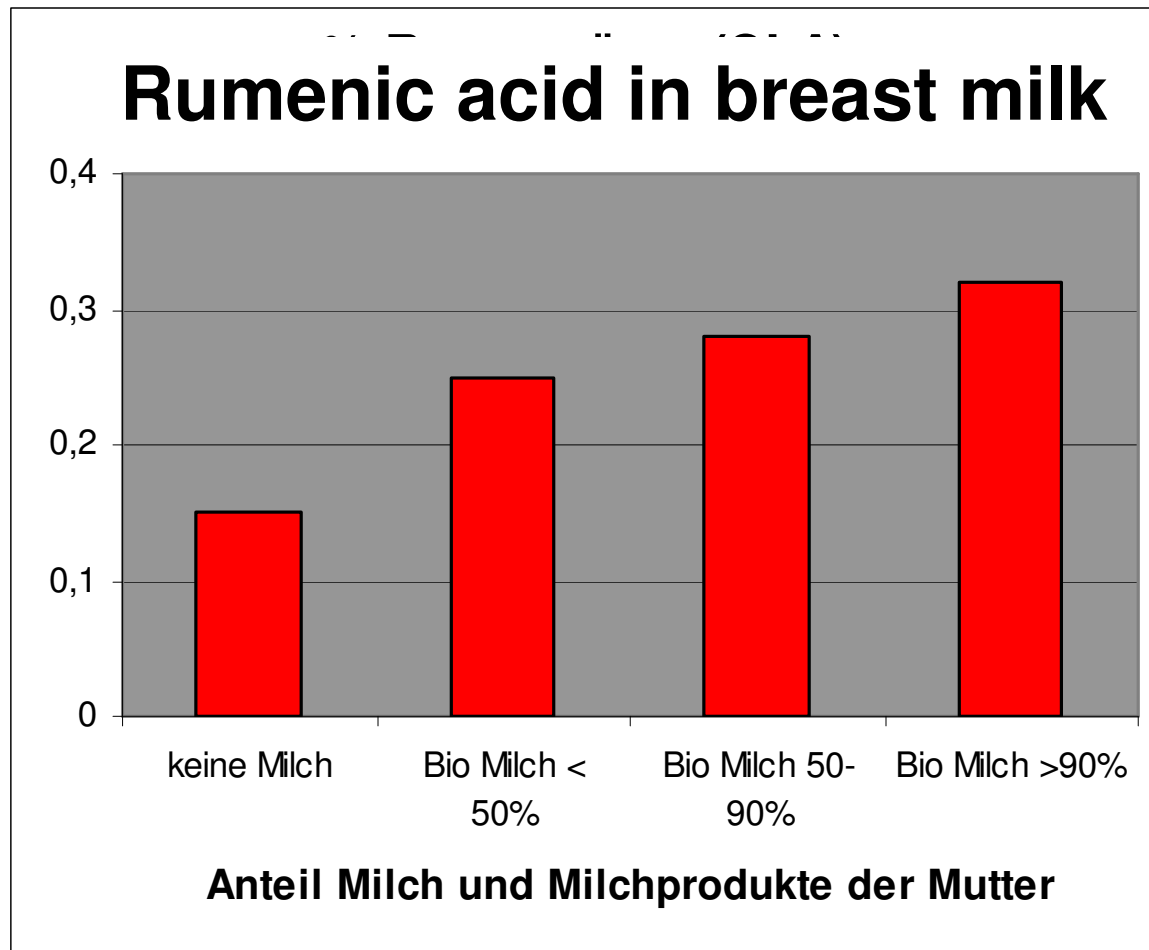
	Farm	Urban
Asthma	1%	11%
Hay fever	1%	3%
Hypersensitivity	8%	29%

Riedler et al (2001)

- **early contact with stables and rawmilk induces protection against spec. atopic disorders.**

Effects of Organic Milk-product Consumption (KOALA)

Rist et al. 2007



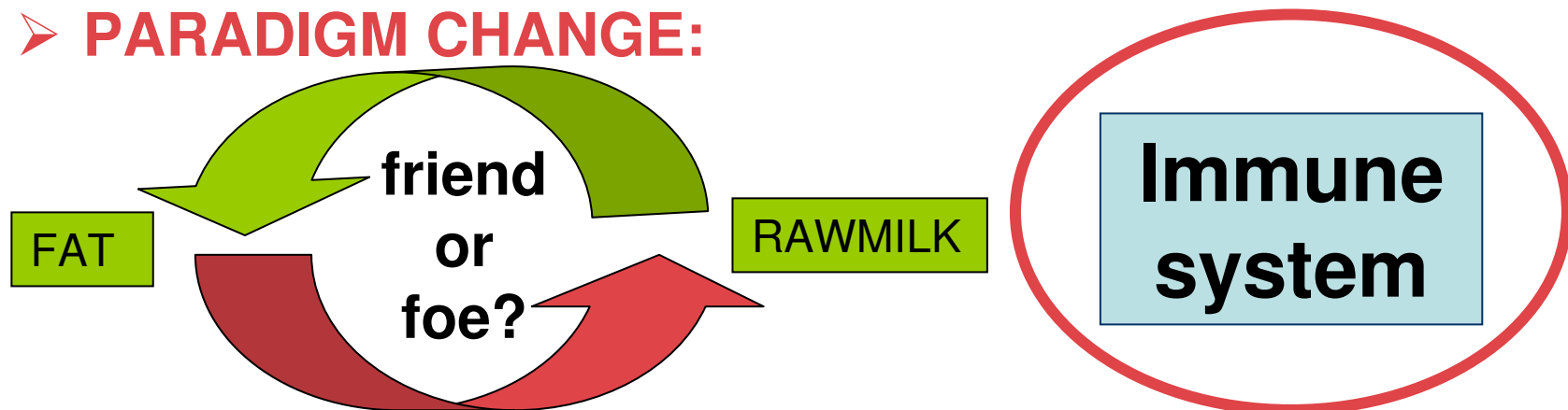
**Organic milk
consumption
reduces risk
of eczema in
children**

Kummeling et al.
2008

Important Factors: Environment and Fatquality

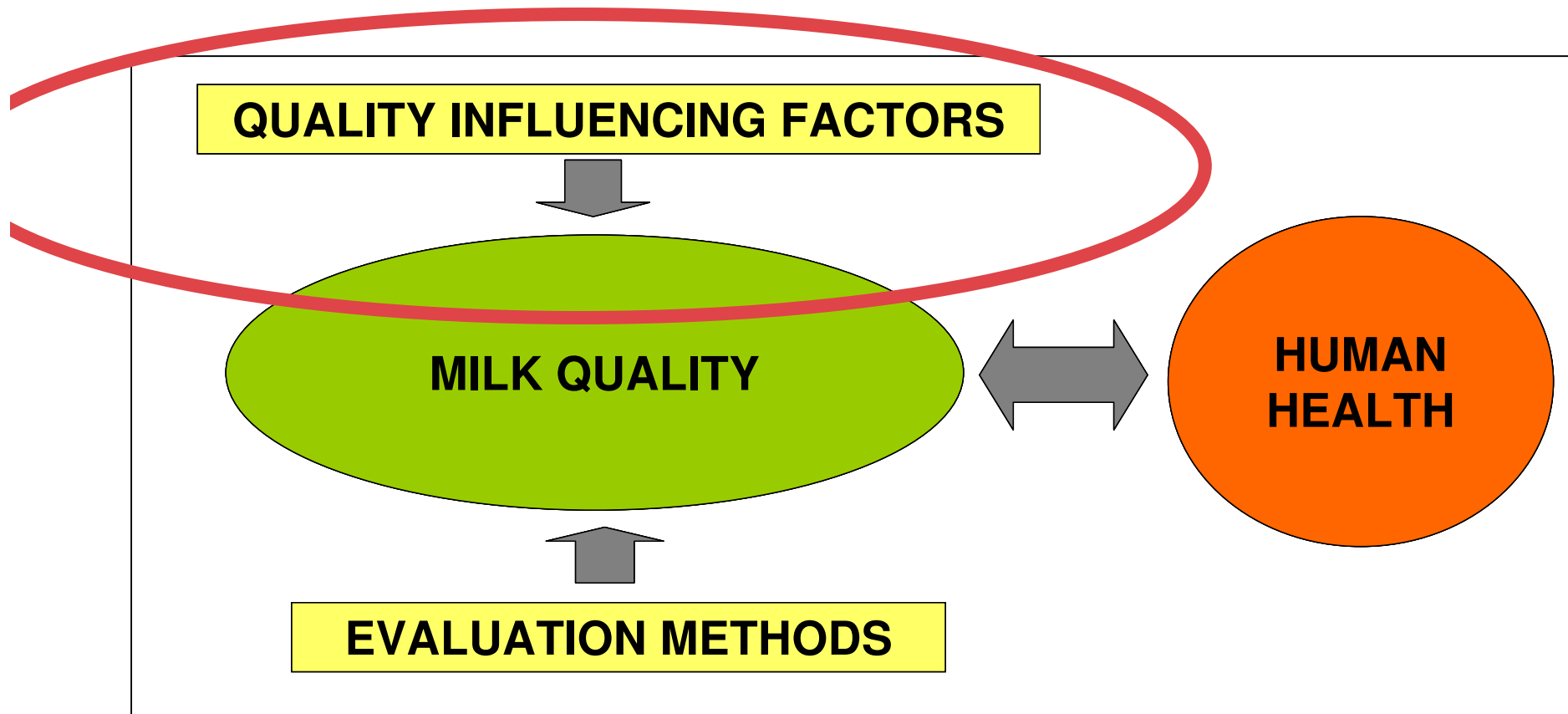
- **Environment: Lifestyle (farming and anthroposophic background) and consumption of fresh farmmilk**
(PARSIFAL)
- **Fat: CLA; Omega 3 and Omega3/Omega6 ratio; Isomer CLA 9c11t** (Jaudszus et al 2005 and 2008)

➤ PARADIGM CHANGE:



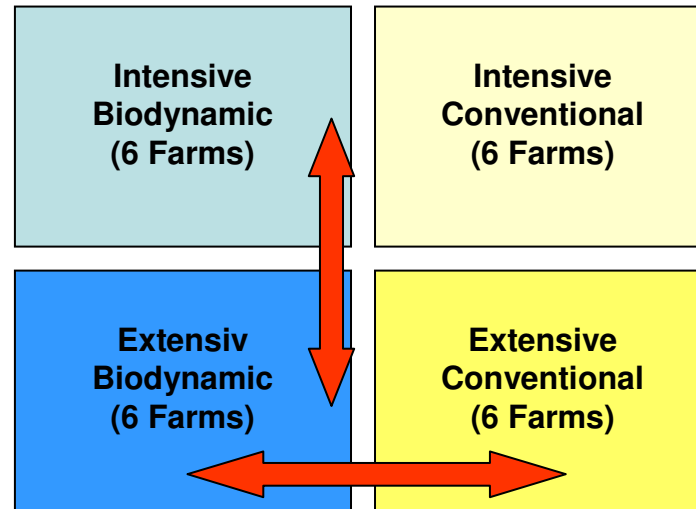
- **New: Lactococcus Lactis und Acinetobacter Iwoffii**

Our milk quality research: 3 projects



Our milk quality research

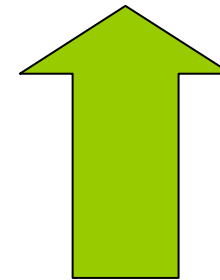
- Project „Status Quo“
- 24 farms
- Each second month bulk milk samples
- Integration of analytical and holistic methods



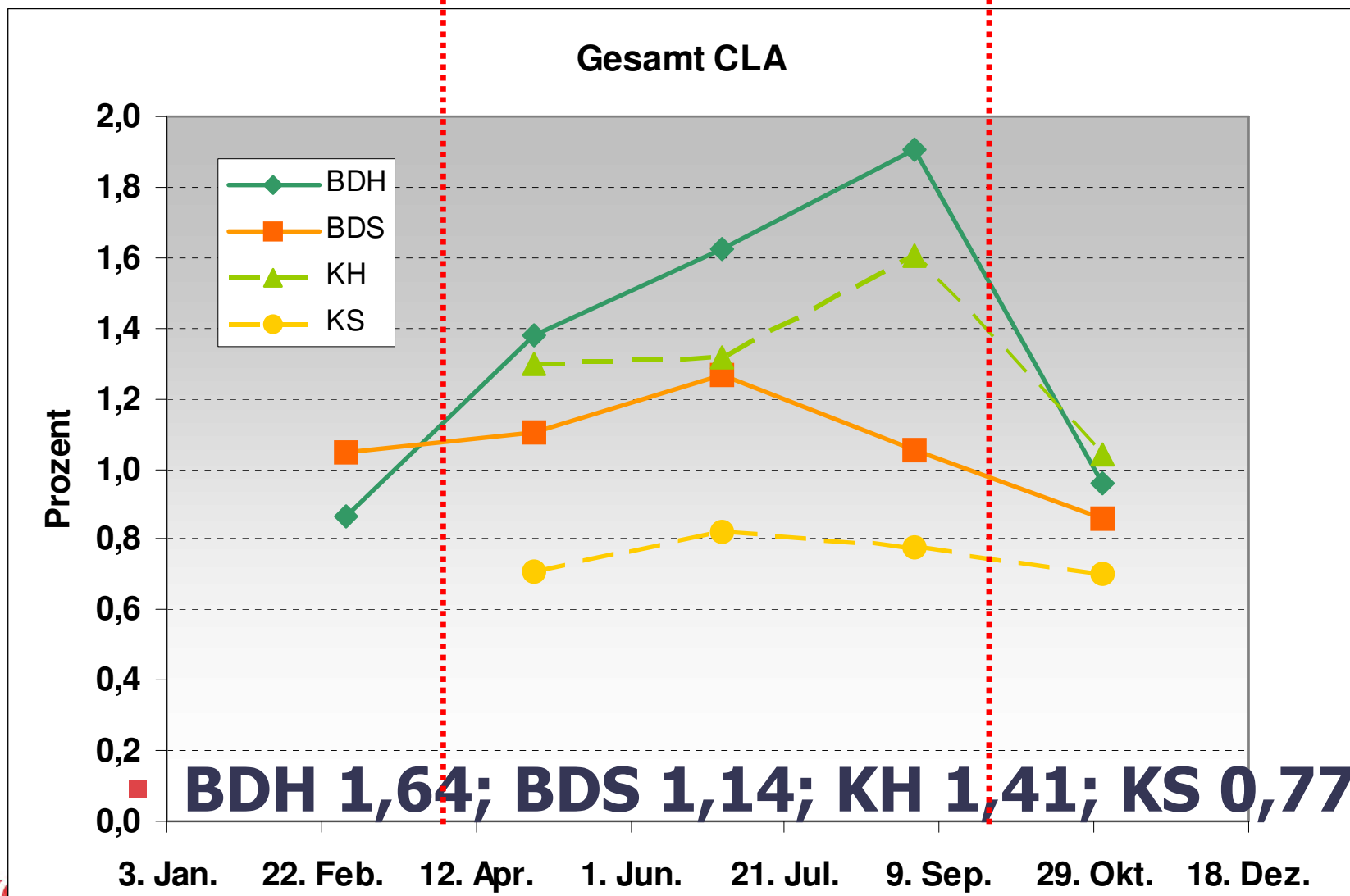
- First results in accordance with recent findings (Butler et al. 2008)
- Organic milk: antioxidant profile

CLA

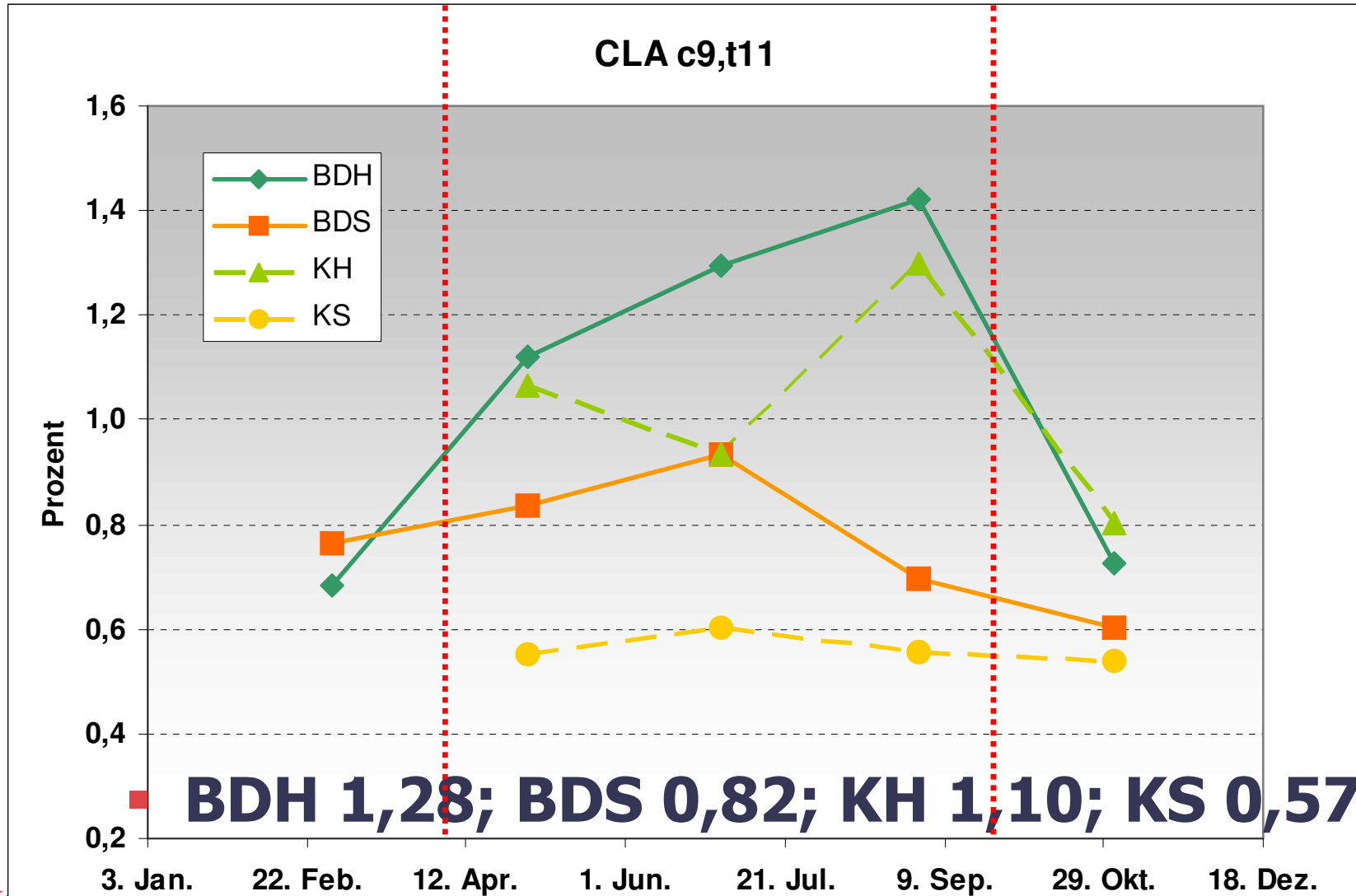
Omega 3



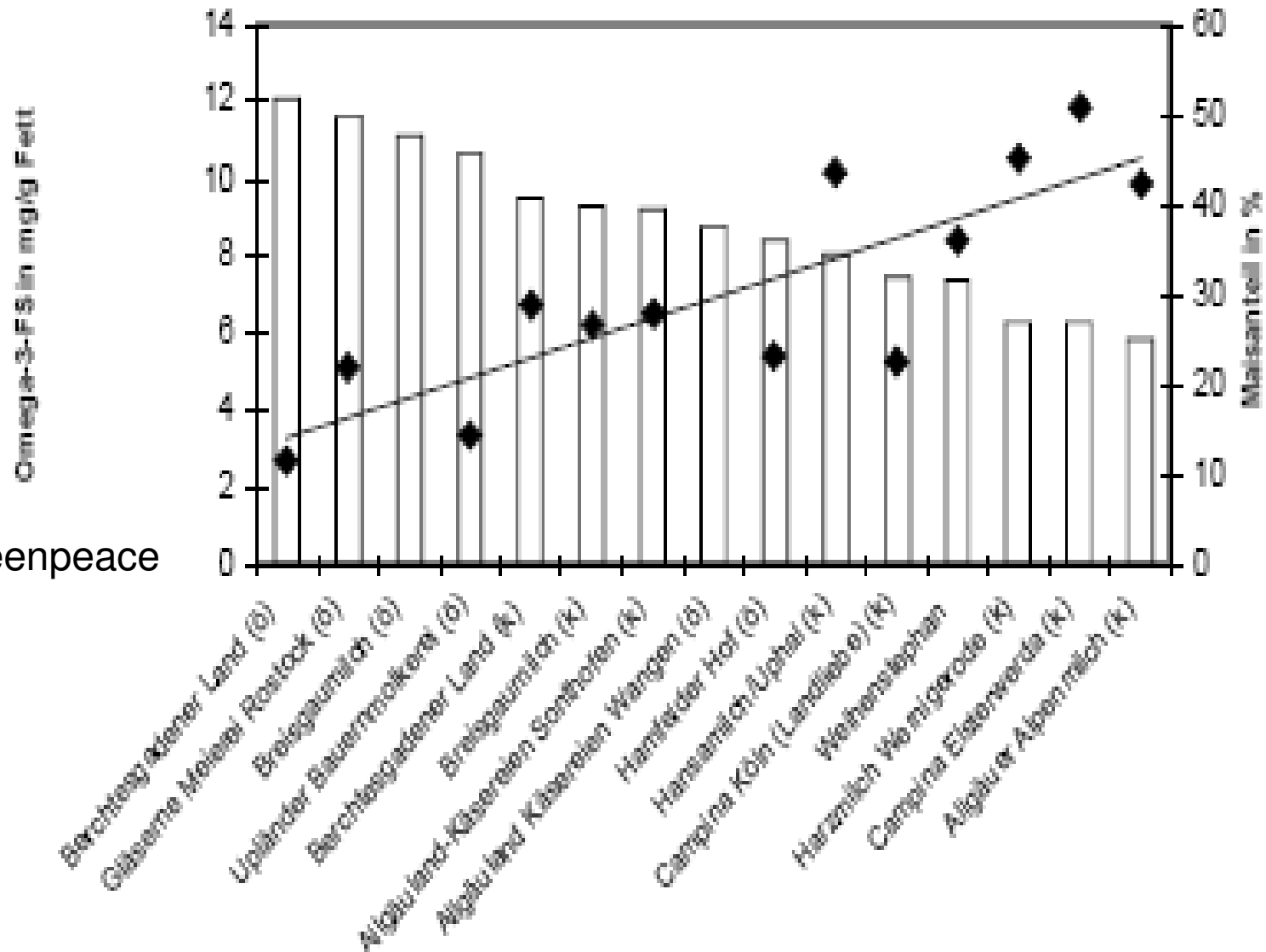
First results: CLA



First results: CLA c9 t11



Authenticity and Quality



Ehrlich / Greenpeace
2006

How to get the potential of milk

- Organic and low input
- Pasture/grazing (no maize silage)
- Intensity (low concentrated feed)
- Region /Height/Permanent pasture
- No homogenization (Vorzugsmilch, Demeter, traditional raw milk cheese)
- Pasteurization? Freshness?



BEST PRACTICE
For a supposedly
beneficial and
preventive
milkquality

Conclusion and Outlook

- **Potential of organic milk – but is it always fulfilled? (ESL etc.)**
 - **Organic (raw)milk as „natural functional food“?**



» Thanks for your attention!

www.agrar.uni-kassel.de/bdl

