

High milk production and good reproduction: Is it possible?

Yoel Zeron
Sion



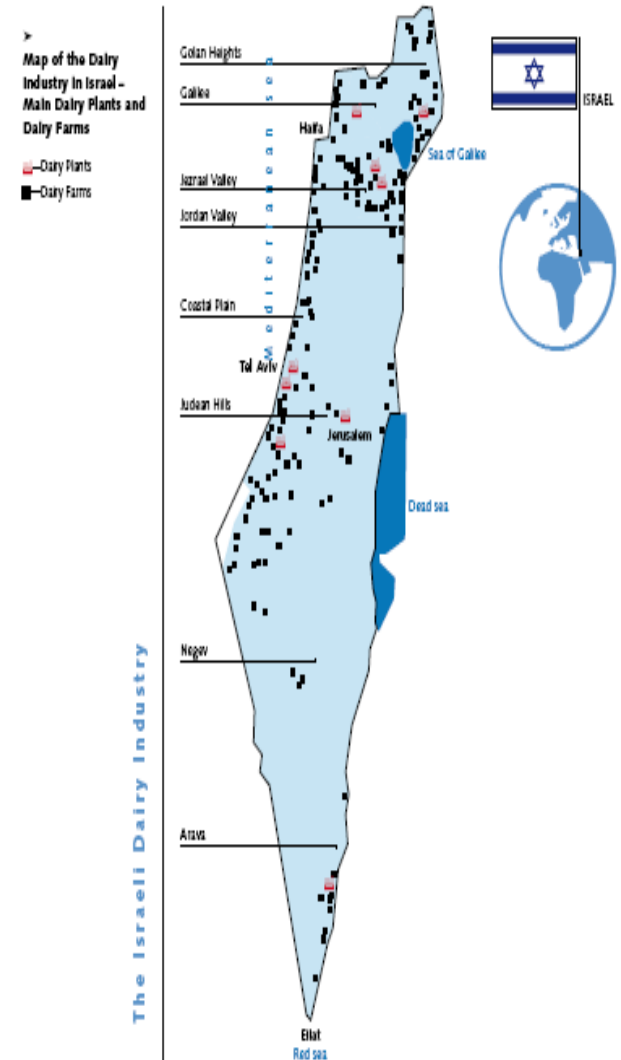
N. Galon
Hachaklait



E. Ezra
ICBA



Israel 22,000 km²



Dairy Herds

~120,000 dairy cows

900 herds

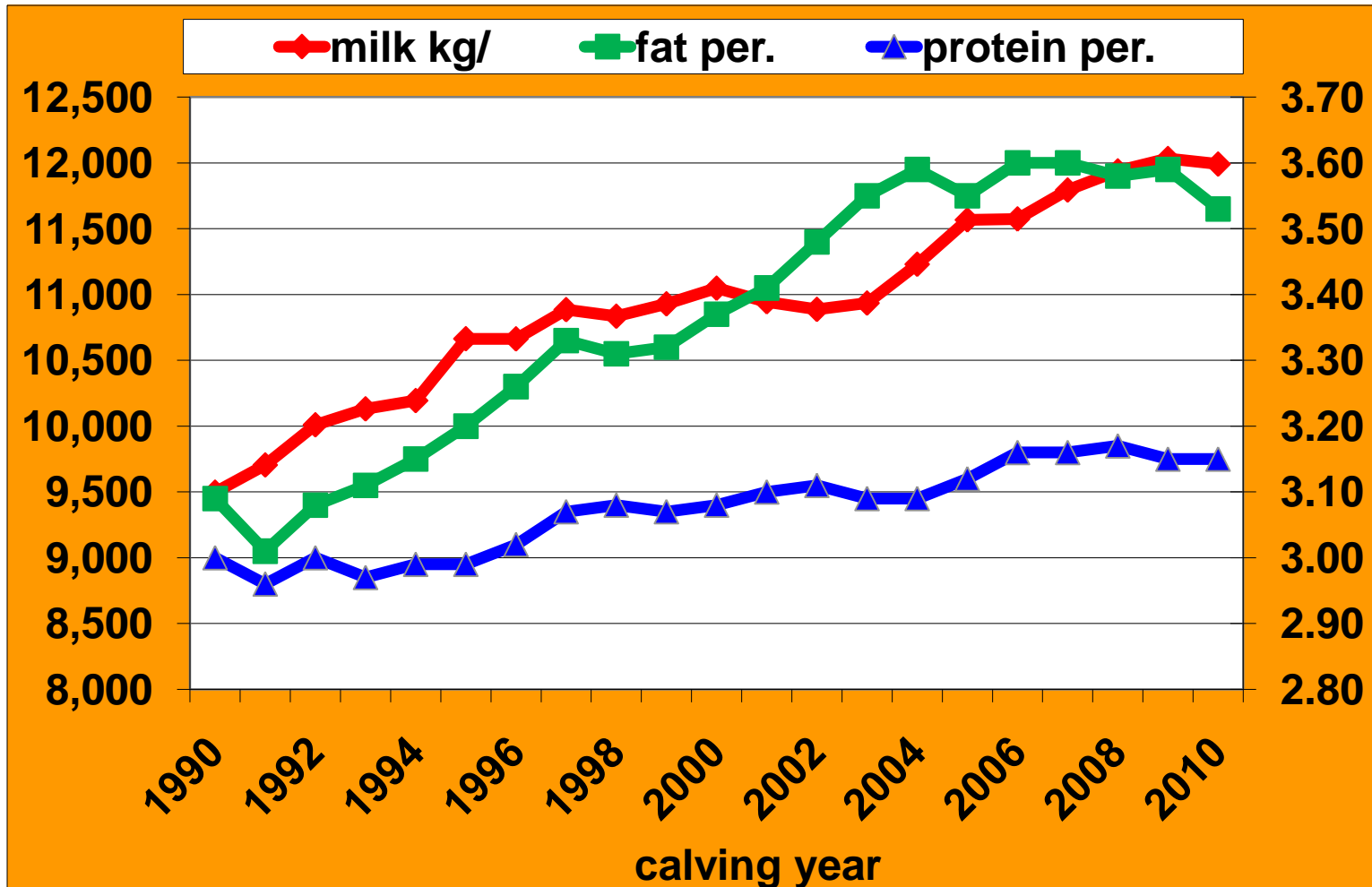
>700 family herds; 40-200 milking cows

165 Kibbutz herds; 250-900 milking cows

98% Holstein

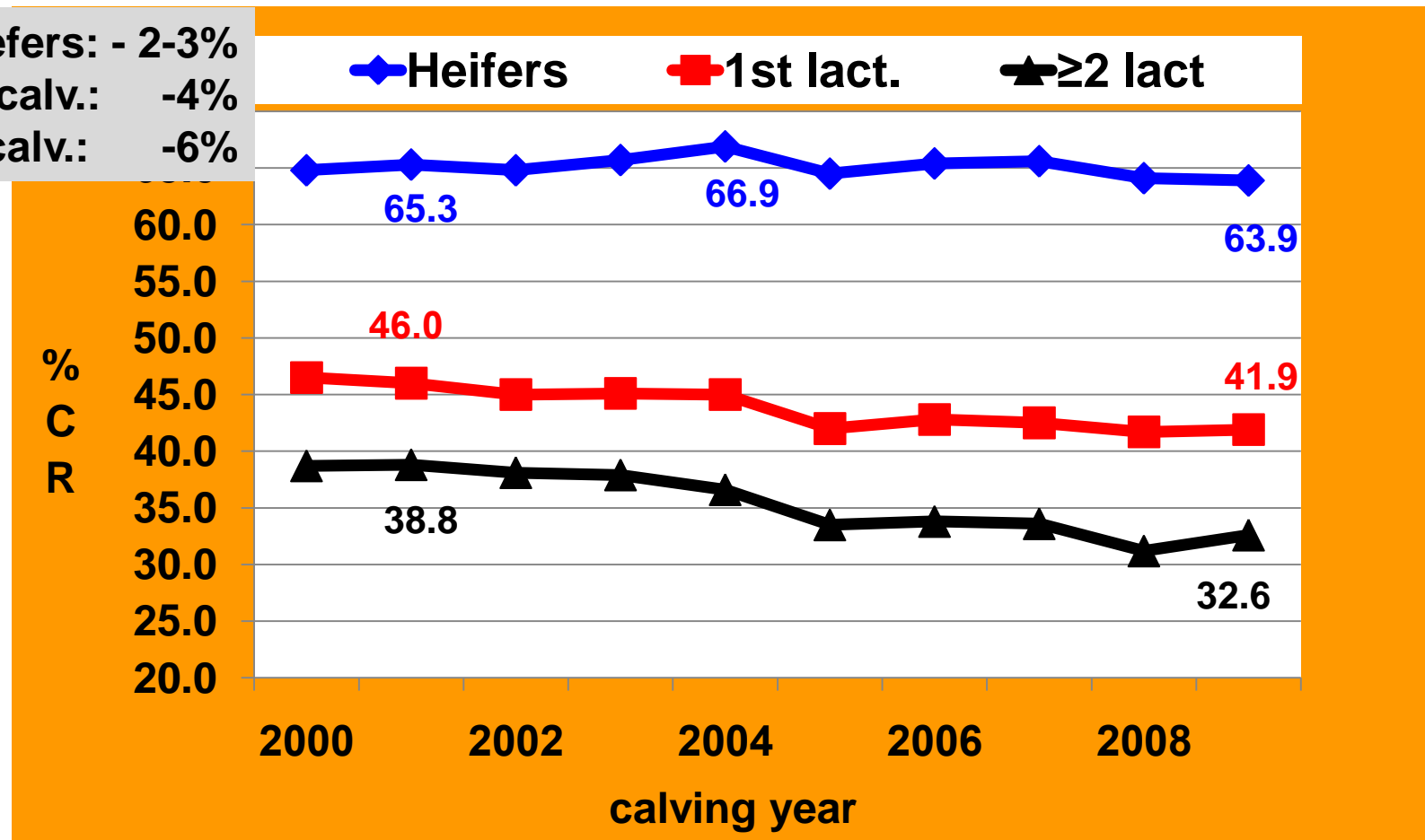
- Automatic ID & heat detection
- Farm Management software
- SION – Artificial insemination & Breeding (42 Tech.)
- Hachaklait Veterinary Services (50 vets)
- ICBA Herd Book (all big herds, 80% of cows)

Progress in Milk Production cow/305d ICBA Herd Book



Annual 1st A.I. Conception Rate kibbutz herds, Israel

Hieifers: - 2-3%
1st calv.: -4%
2+calv.: -6%



Declining fertility

Who can we blame ?

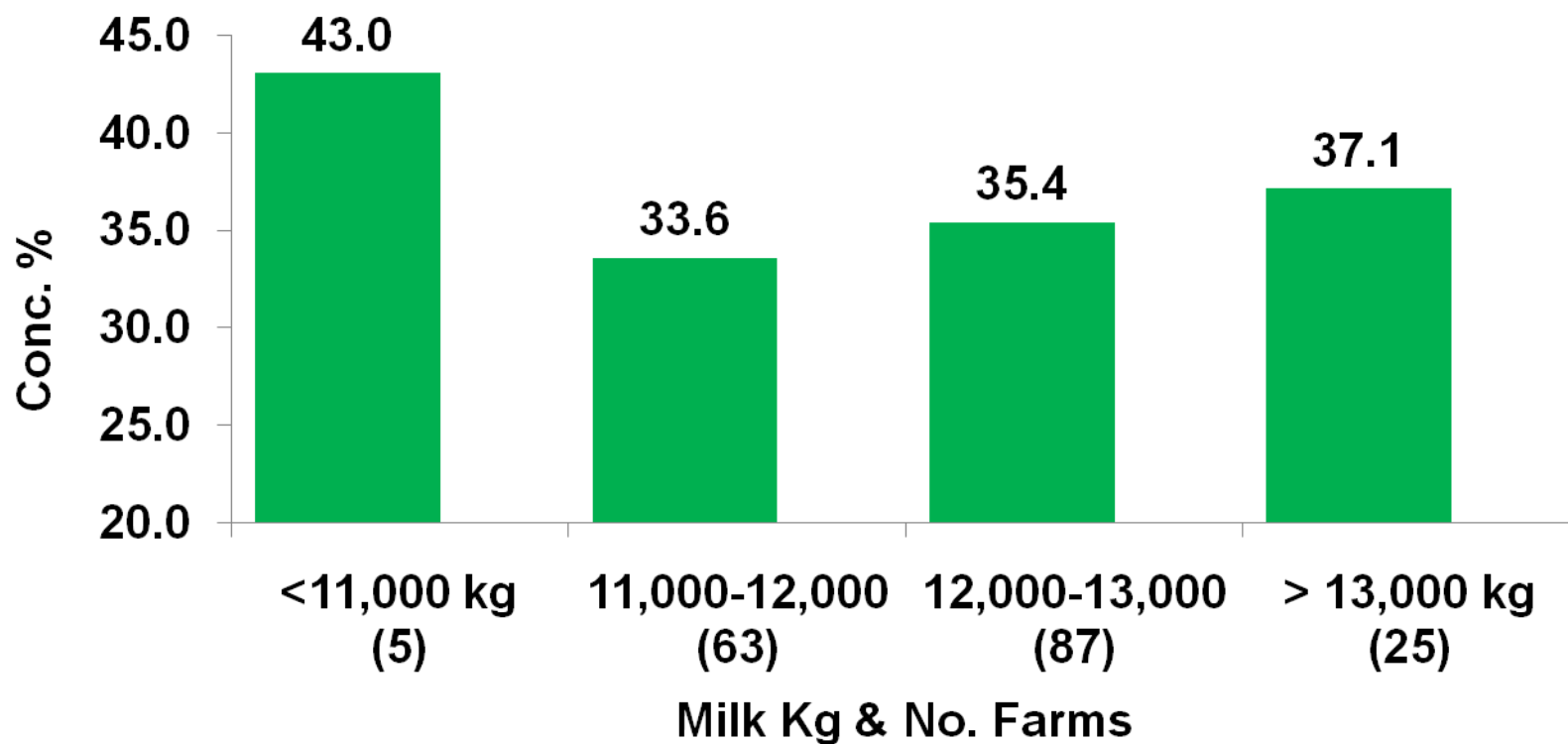
- Milk yield
- Nutrition, NEB
- Post Parturient Diseases
- Heat detection
- A.I. technician / semen
- Summer
- Other diseases (mastitis, BVD)
- Genetics / selection for high production
- Production policy, Other factors...

The rules of the game (Israel)

- **Annual milk quota**
- **Summer premium & winter penalty**
- **Farmer's objective - Profit**
- **Tradition & trends**
- **Reproduction – a mean not an aim**

Milk?

CR (1-3 AI) by milk Herd level Kibbutz herds kg/ cow/305d

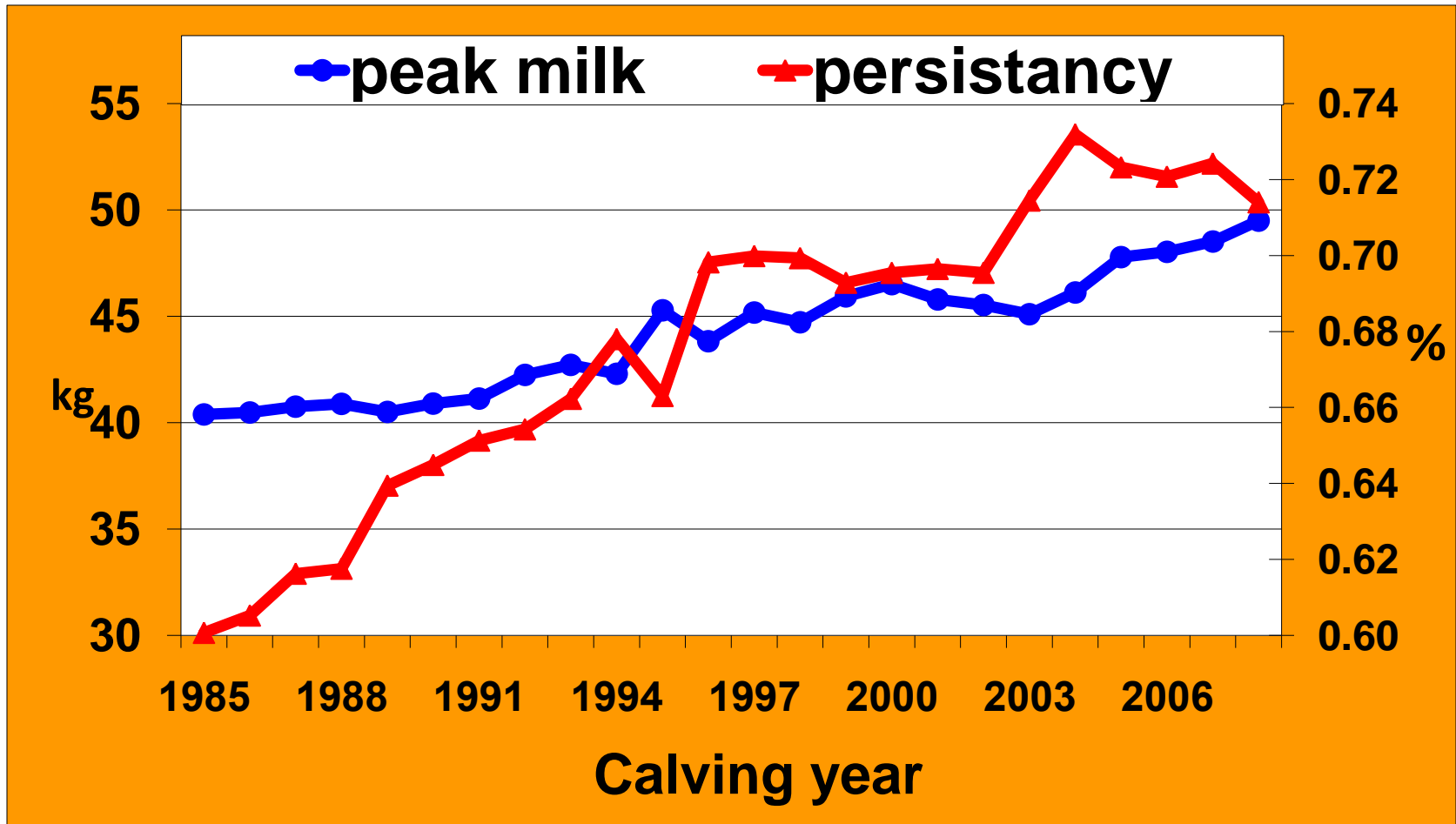


Milk?

Lactation Peak & Persistency

$(\text{Peak kg} + 180 \text{ d})/2$

Peak kg



Nutrition

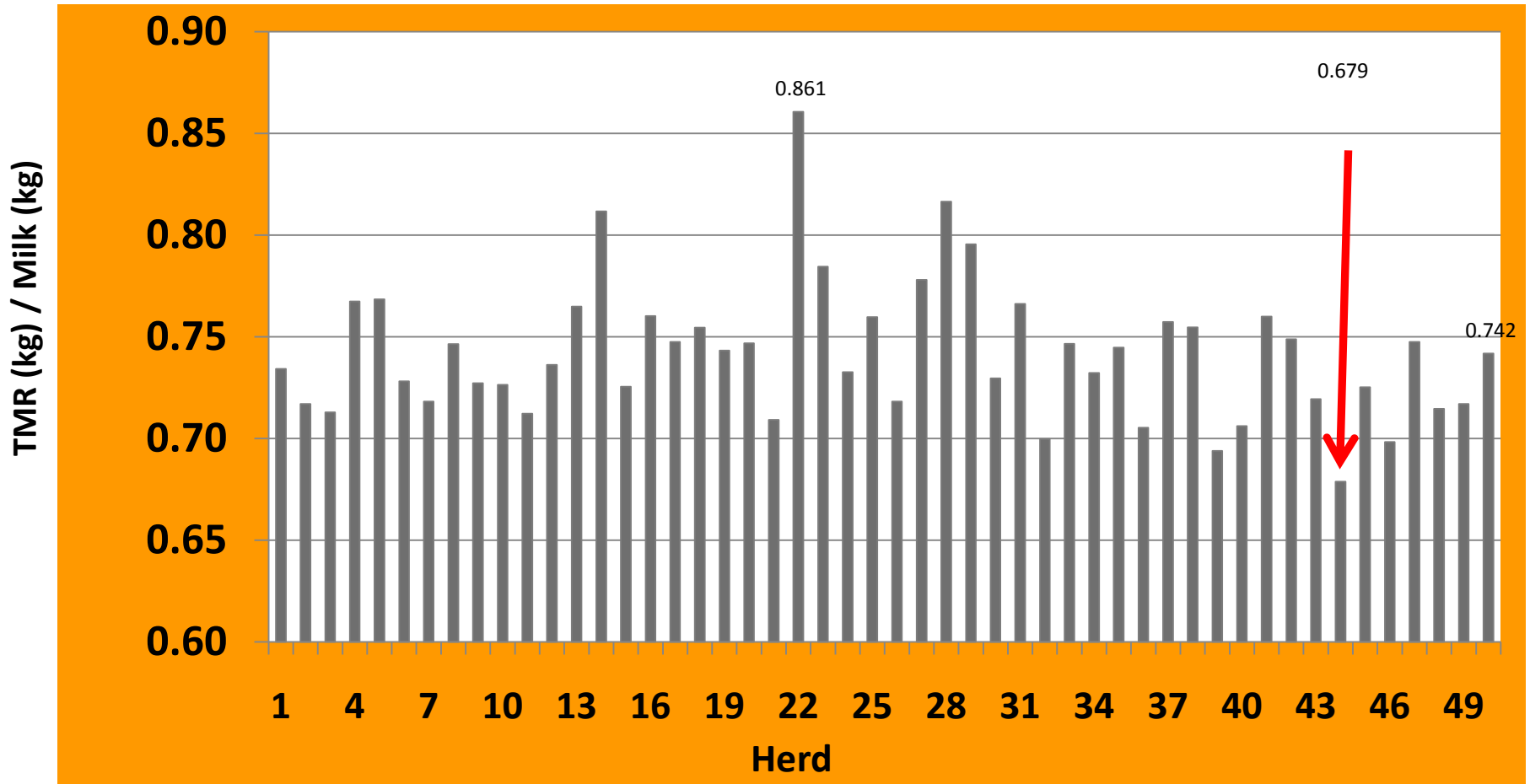
- **Zero grazing**
- **Ad Lib TMR**
- **65% concentrate**
- **Close-up & fresh-up rations**
- **Feed bunk management**
- **Water, cooling, resting area**
- **Social hierarchy, grouping**
- **Overcrowding...**

- **Minerals and vitamins ???**



Nutrition?

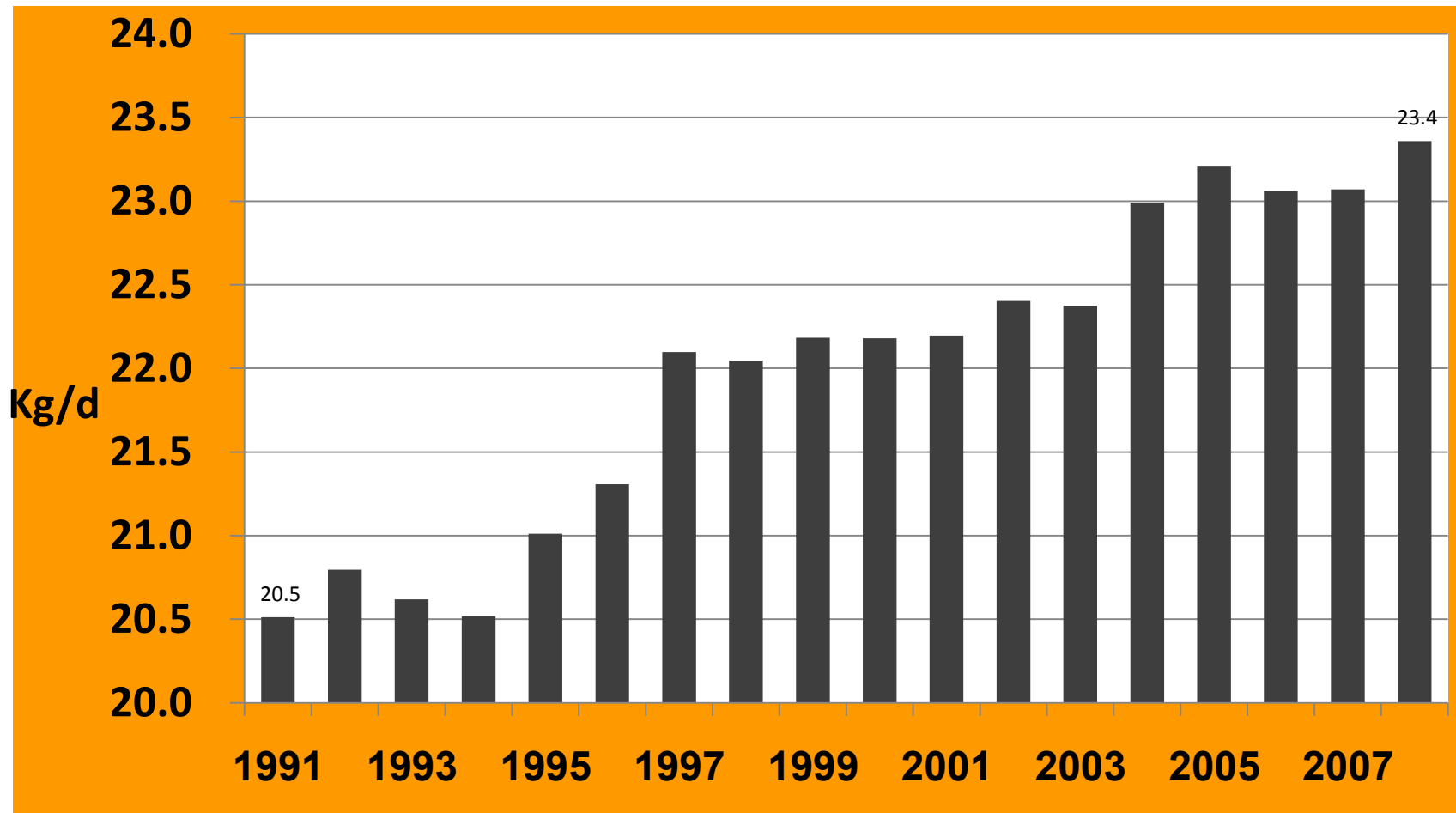
TMR (Kg) / EC Milk (kg) comparing herds



Y. Begon , regional economist

Nutrition?

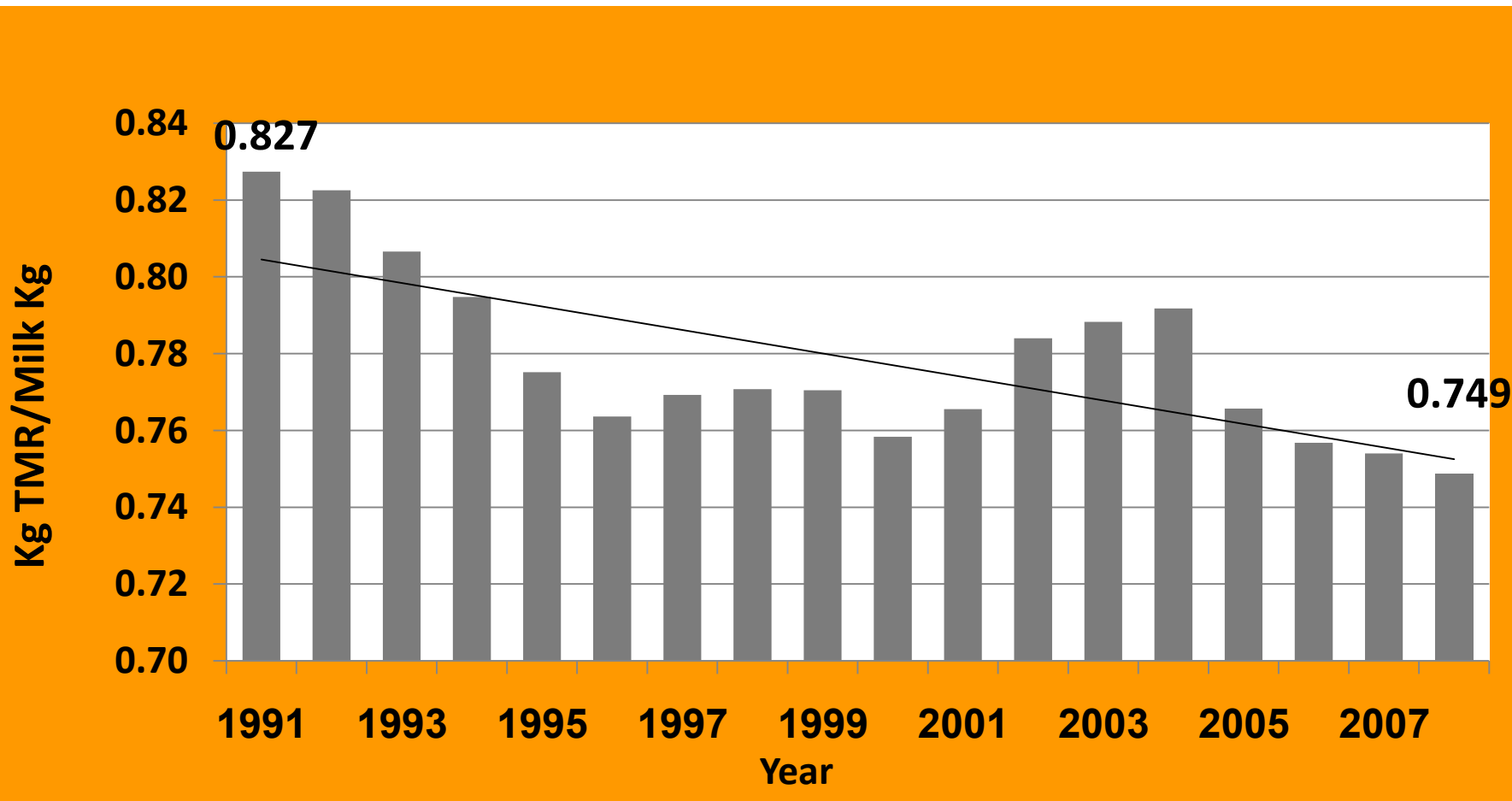
TMR (kg) / Cow / Day (kg) multi herd average



Y. Begon , regional economist

Nutrition?

TMR (kg) / Milk (kg) (~50 herds)

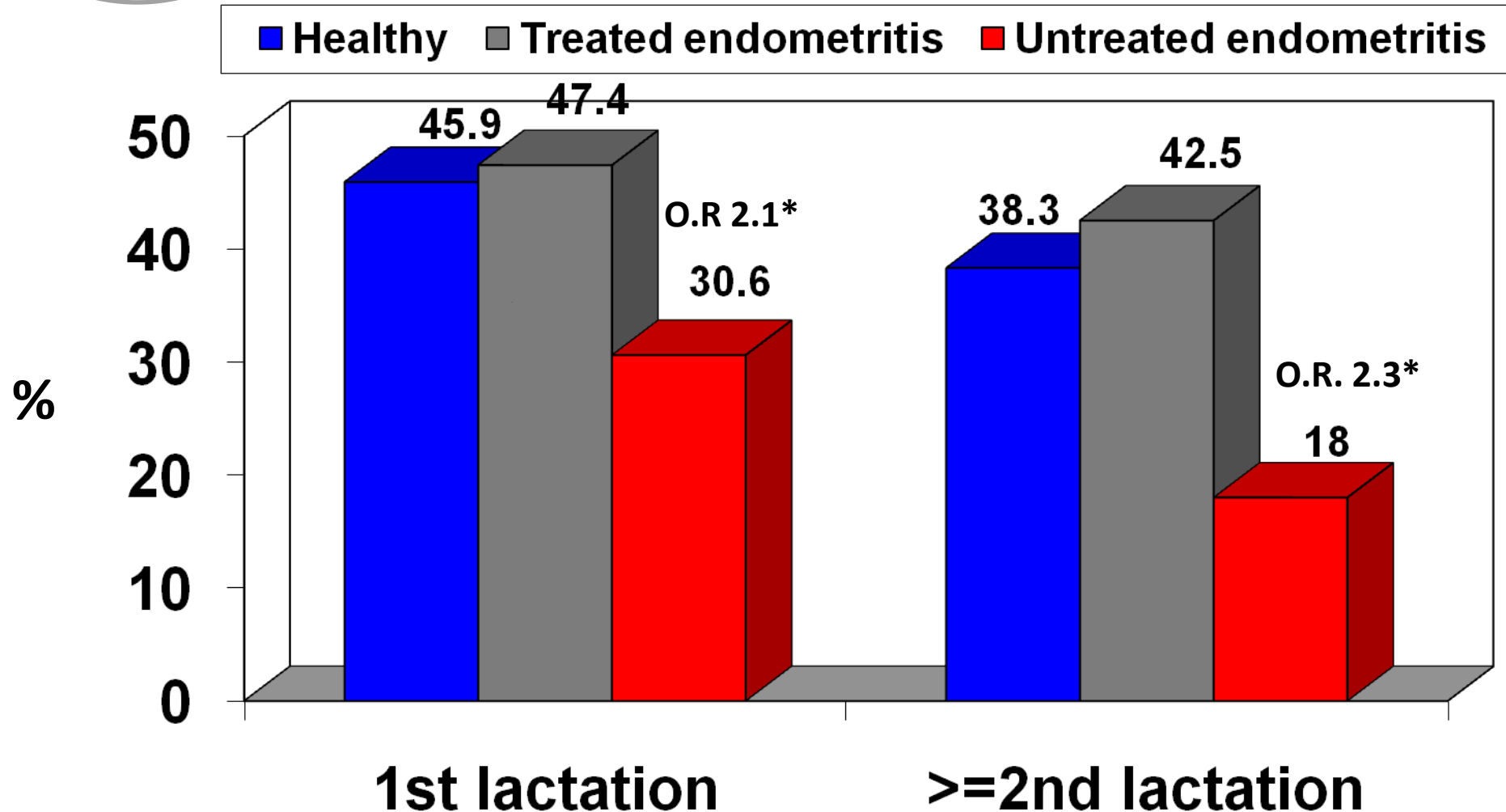


Y. Begon, regional economist

EAAP, Stavanger Norway, August 2011

PP
Diseases

The effect of Endometritis treatment on 1st AI CR



Goshen, Theriogenology 2006

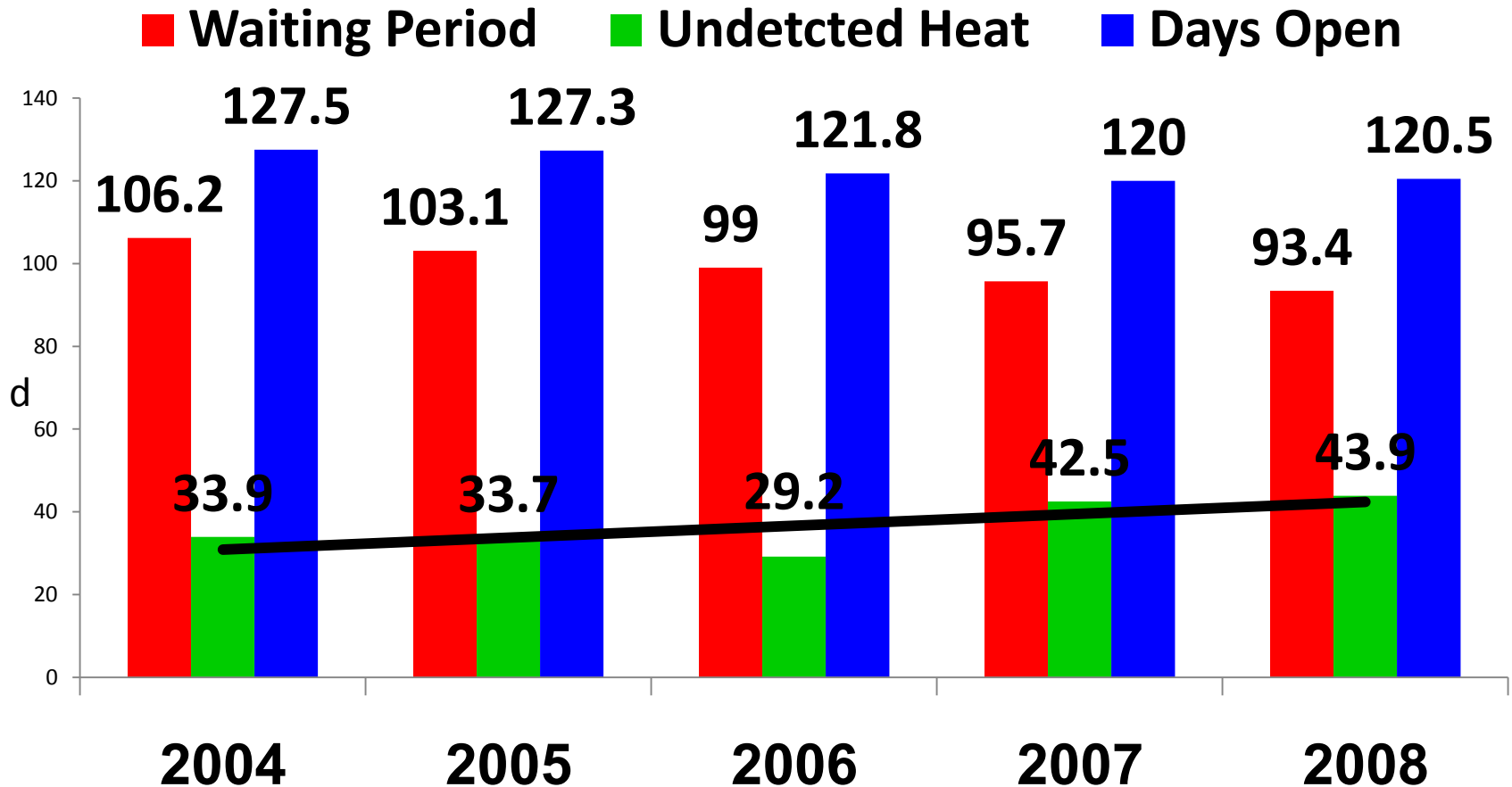
EAAP, Stavanger Norway, August 2011

Heat detection

- Automatic detection in all big herds
 - Pedometers – Afimilk™
 - Neck movements- S.C.R. Ltd
 - Efficiency- poor to very good
- Observation - less & less
- Sync's only for anestrus



Waiting Period, Undetected Heat and Days Open

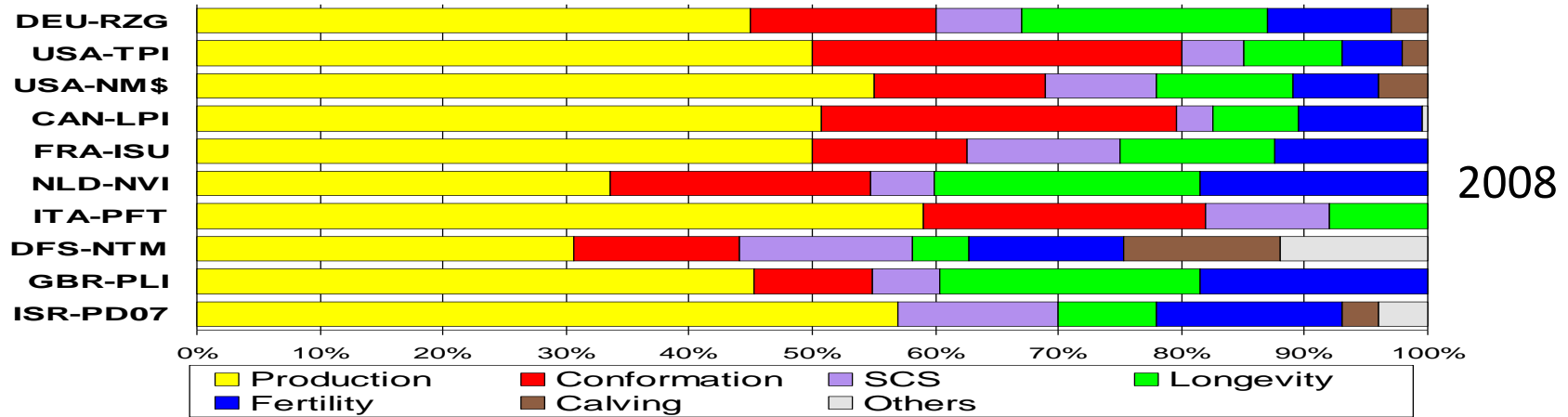


Should we blame genetics ?



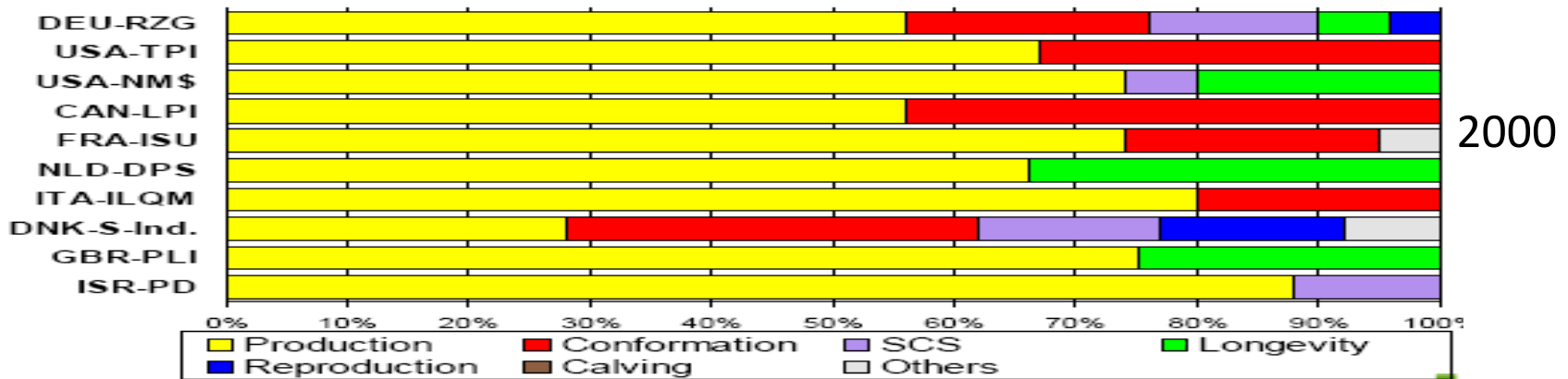
Genetic
?

Breeding indexes in several countries



Secondary traits in international Holstein breeding goals

Year 2000

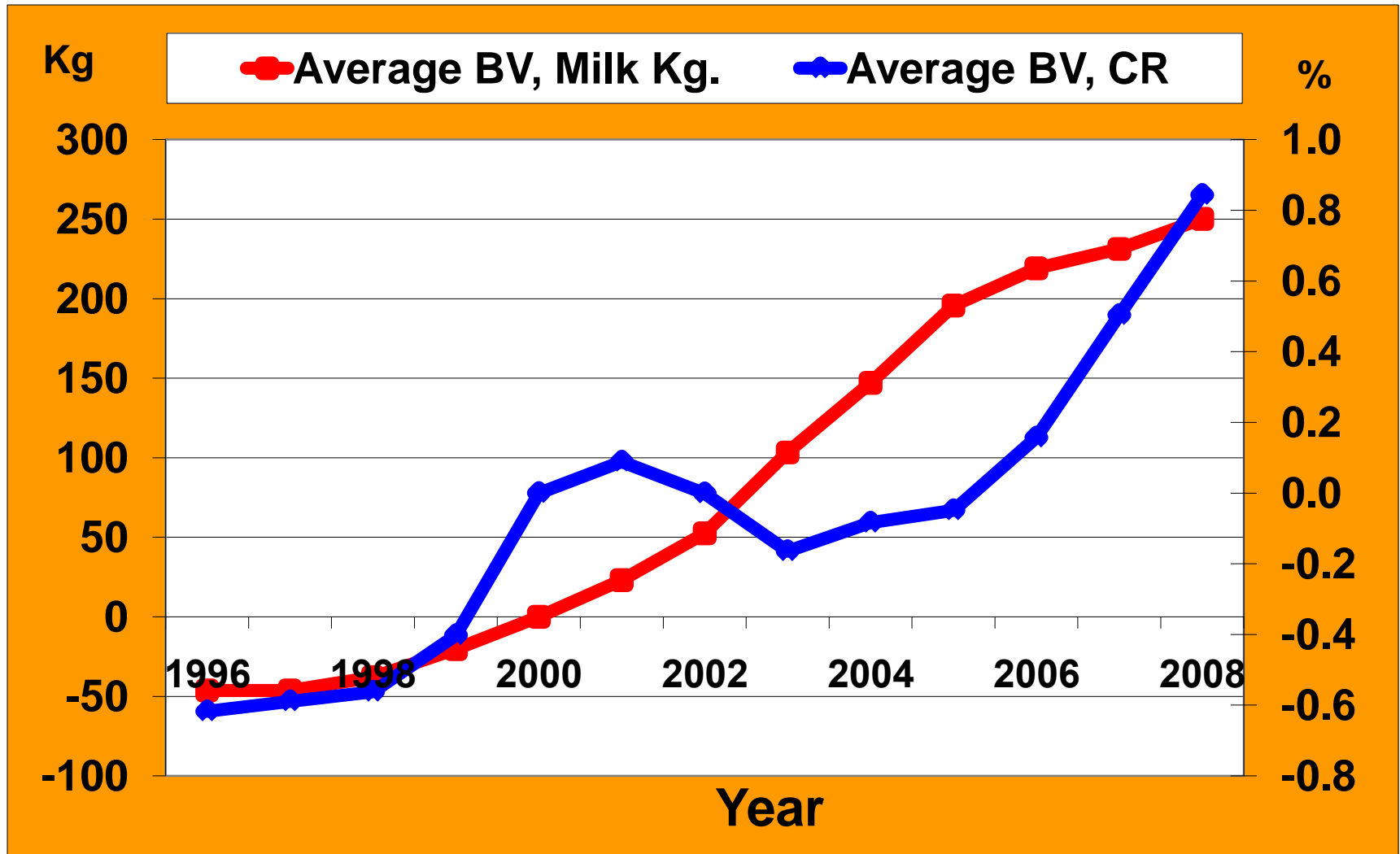


Stefan Rensing , Germany

EAAP, Stavanger Norway, August 2011

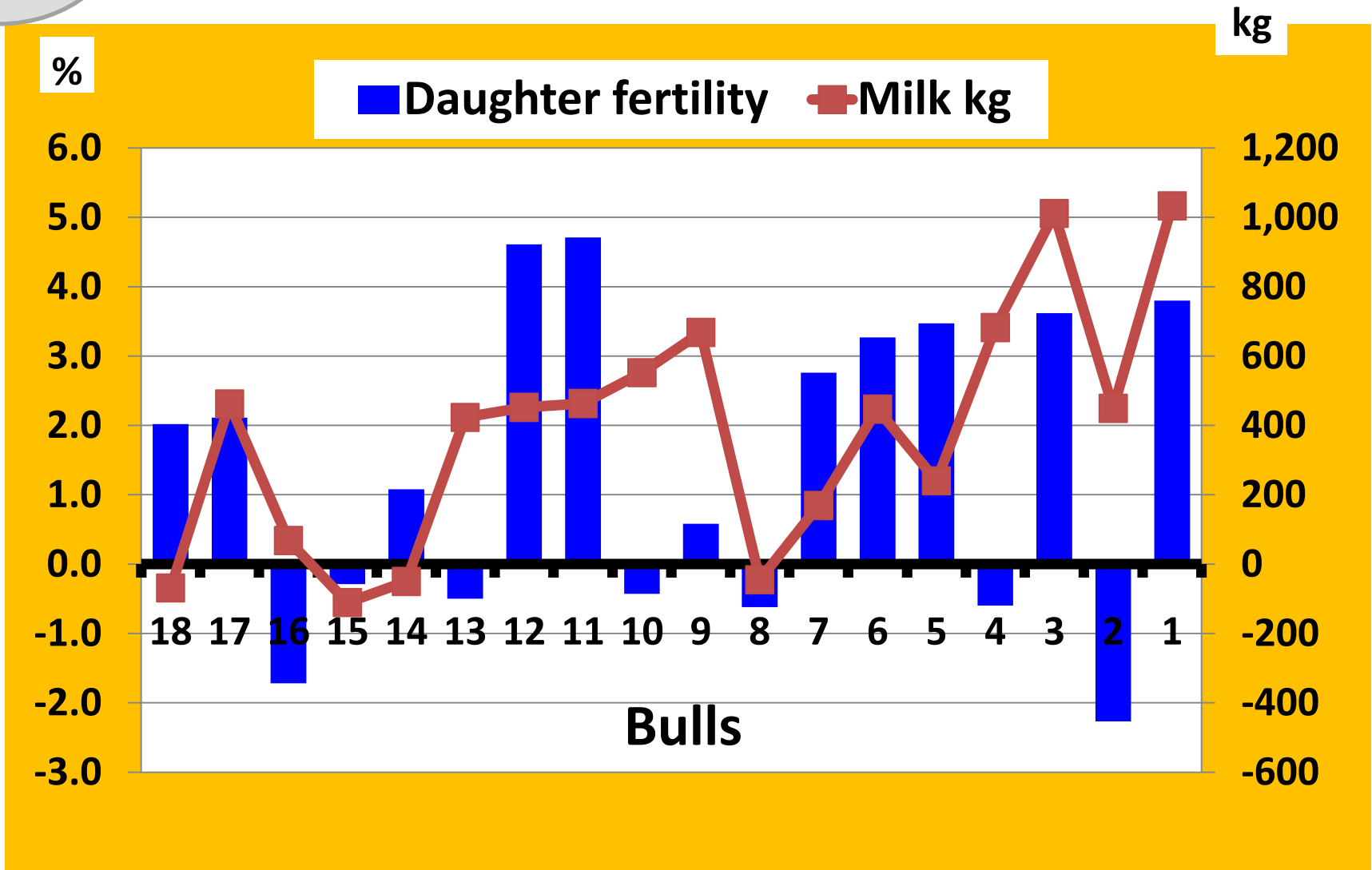
Genetic
?

Genetic Breeding Value



Genetic
?

Use of the Bulls from SION Catalog – by PTA



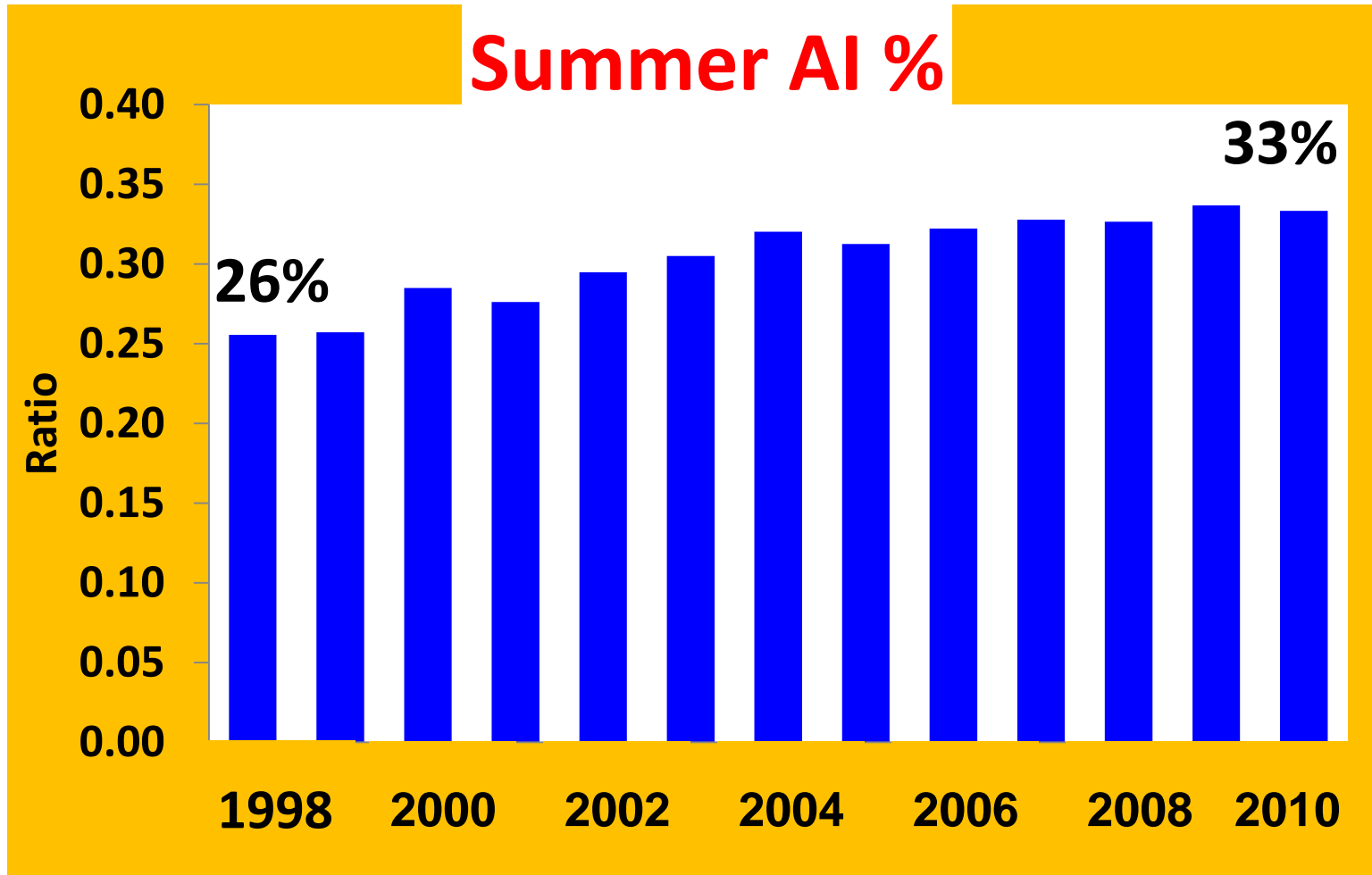
Cross breeding ?

- The Israeli experience
 - Montbeliard
 - Jersey
 - NRF
- “Fashionable” (1-2%)
- Lots of anecdotes
- Poor in the Israeli index
- Heterosis, and what about next generation? Need a special program

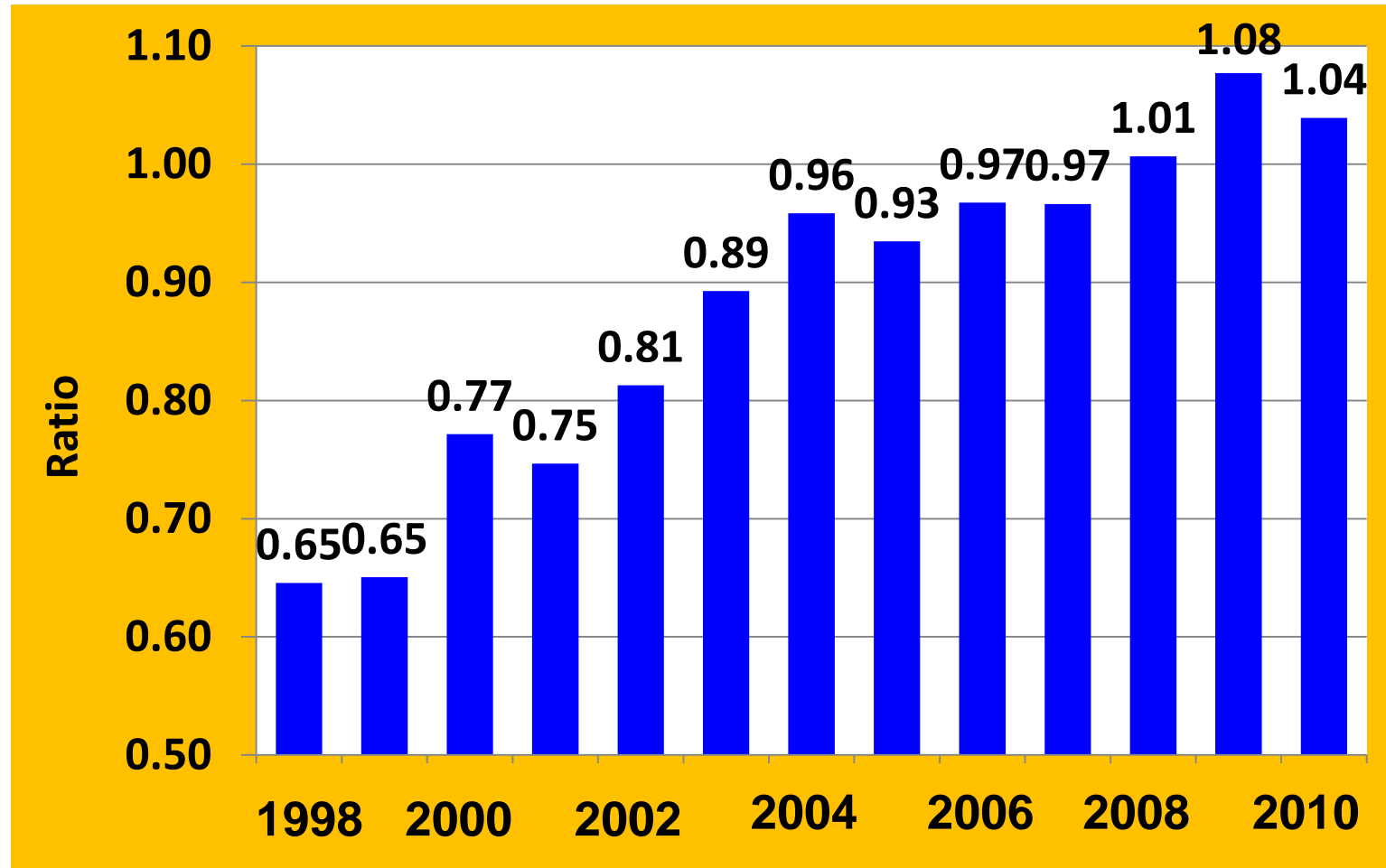


THI?

Rate of Summer inseminations (summer = July - September)

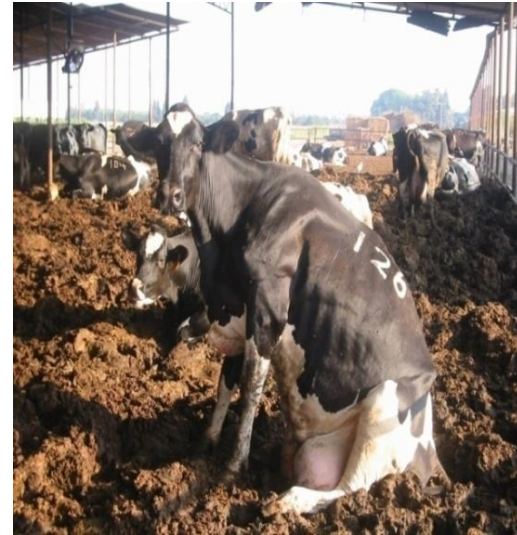


Summer (Jul-Sep) : Winter (Jan- Mar) AI Ratio

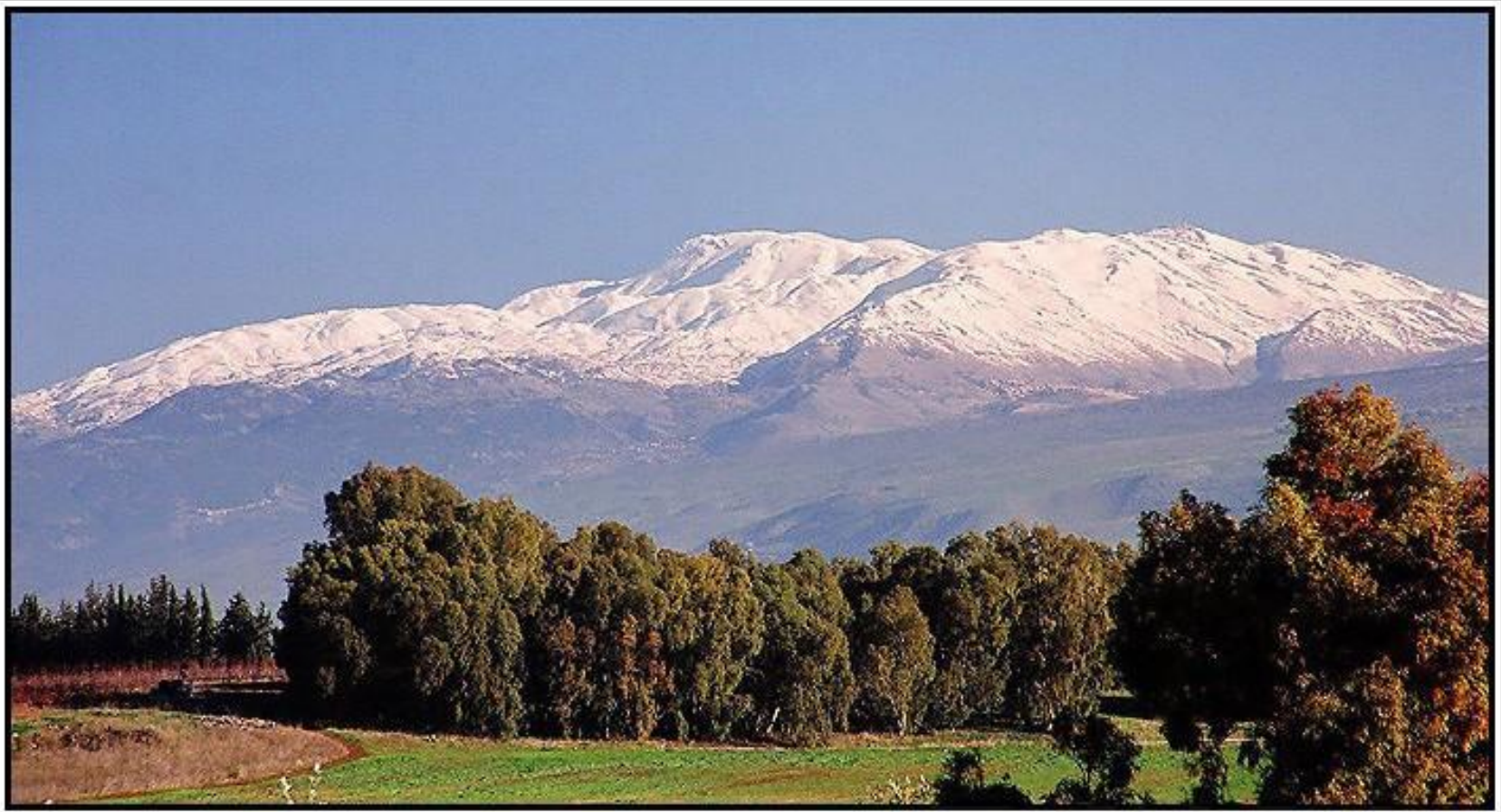


Take home message

- **“The truth is in the details”**
- **Economical perspective**
- **The decline is manageable**
- **What will we see in 2011-2012 ?**



Thank You



EAAP, Stavanger Norway, August 2011