Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Swedish Farmers' Foundation for Agricultural Research

Why don't cows live longer? Herd factors affecting longevity

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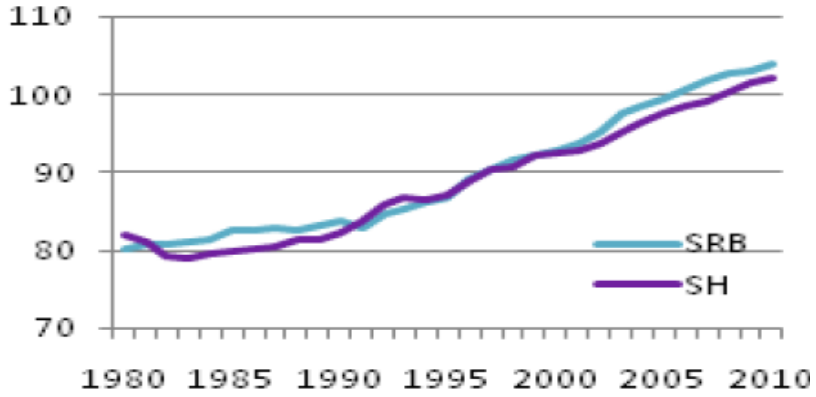
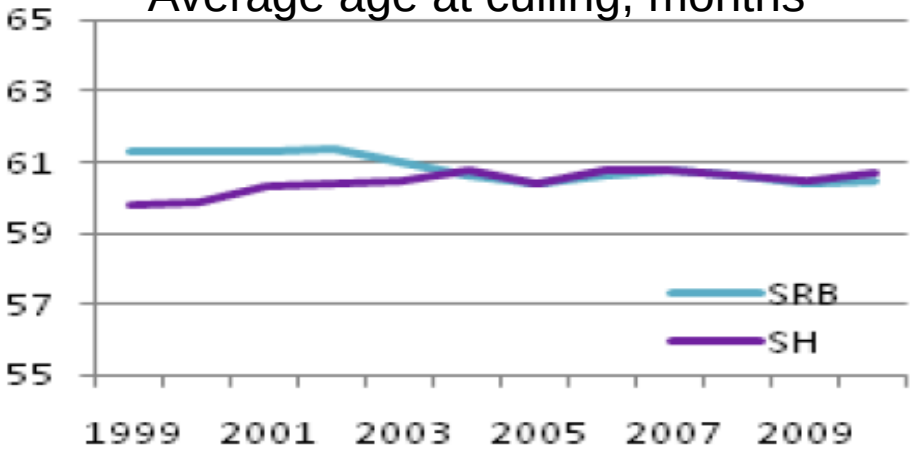
Financed by The Swedish Farmers' Foundation for Agricultural Research

Background

Breeding value for longevity

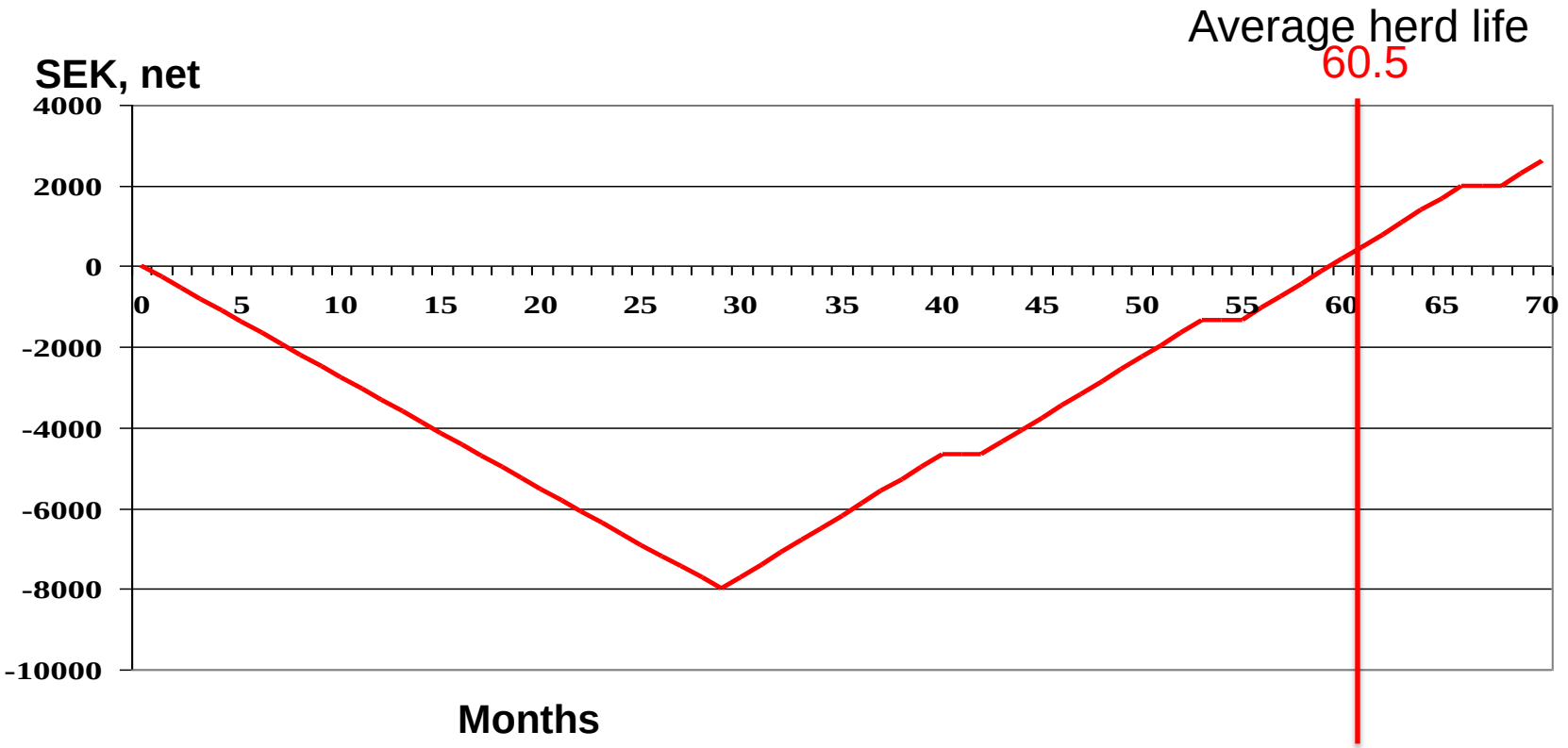


Average age at culling, months



Source: Jan-Åke Eriksson, Växa Sverige and statistics from Växa Sverige

Breakeven for replacement heifer



Source: Patrik Nordgren, Växa Sverige

Background

- Positive genetic trend in longevity
- Large economic benefits of increasing longevity
- Large potential: the 10th percentile with lowest culling have 16% culling rate, whereas average is 29%.

So, why does longevity not increase?

Aim

Identify factors at the herd level important for short or long average length of life.

Material and method

- All individuals (females) born or calving from Sep 2004 to Aug 2011 from all herds with at least 20 cows 2010/2011
- “Case-control” study
  - ¼ of herds with shortest and ¼ of herds with longest average life; Low PL: 765 herds High PL: 638 herds
- Based both on total length of life (from birth, TL) and productive life (from first calving, PL)
- Calculated as average “age” of cows culled in the herd during 3 years at the end of data
- Logistic regression using high TL/PL vs low TL/PL as dependent variable

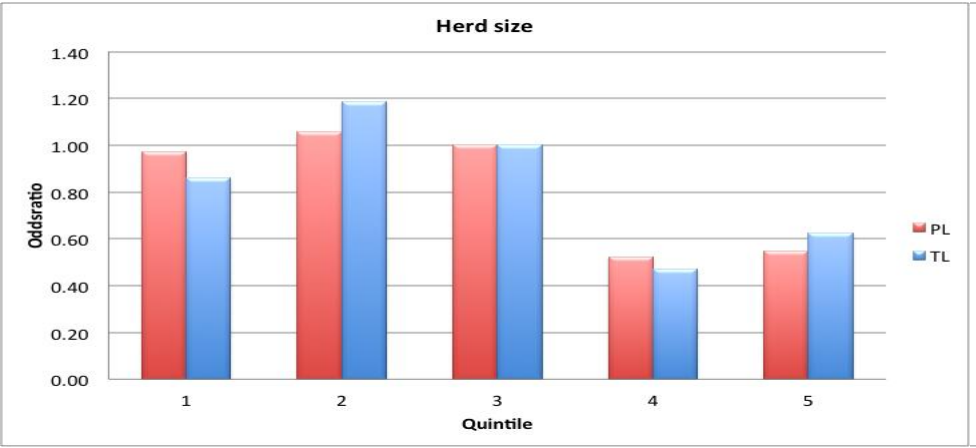
Data available

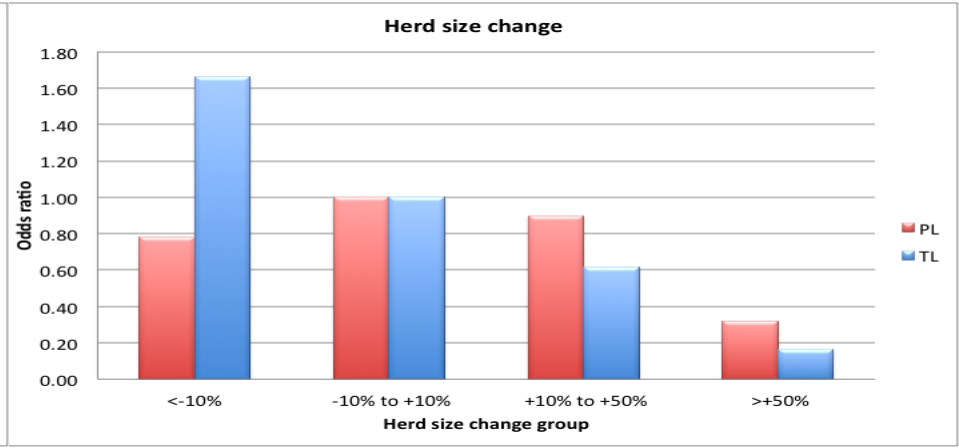
- Information on individual cows, e.g.,
  - Calving dates
  - Culling dates and reasons
  - Diseases
  - Lactation 305-d yield
  - Milk breeding values cow, sire and dam
- For the herd
  - Information about the production system, organic/conv, milking system, et cetera
  - Welfare indicators, 24 indicators summarized into 7 categories

Calf health	Young stock health	Calvings
Feeding problems	Diseases	Longevity
Monitoring and management		

Conclusions

- Large herds and herds increasing much in size is a risk factor, should pay more attention to longevity (TL > PL)





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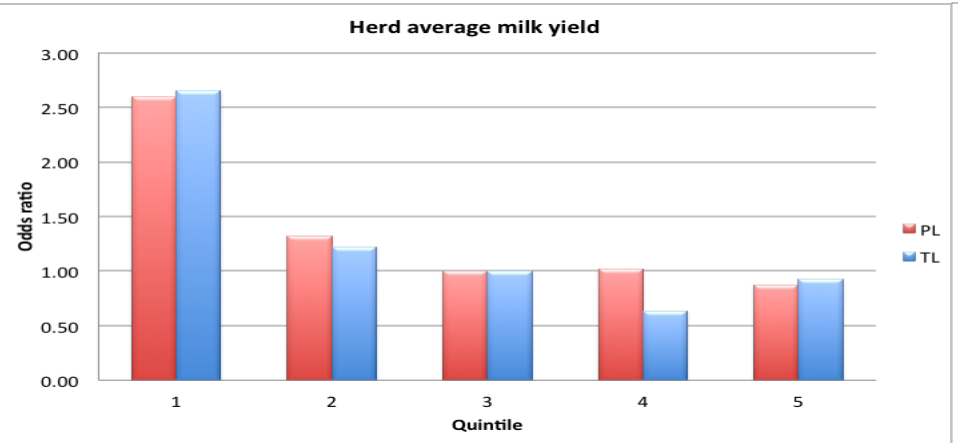
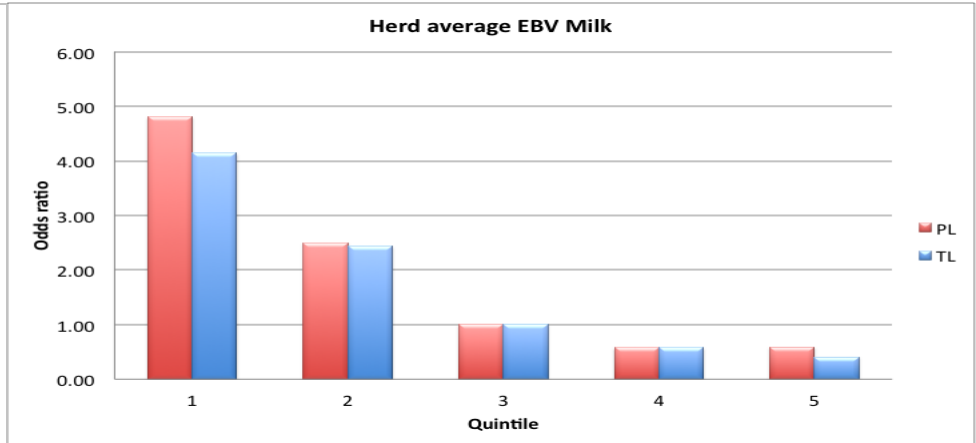
- Large herds and herds increasing much sizes is a risk factor, should pay more attention to longevity (TL > PL)
- High average milk yield is not a risk factor per se
- Relationship with genetic level for milk probably: long PL causing low EBV Milk, not EBV Milk being a risk factor





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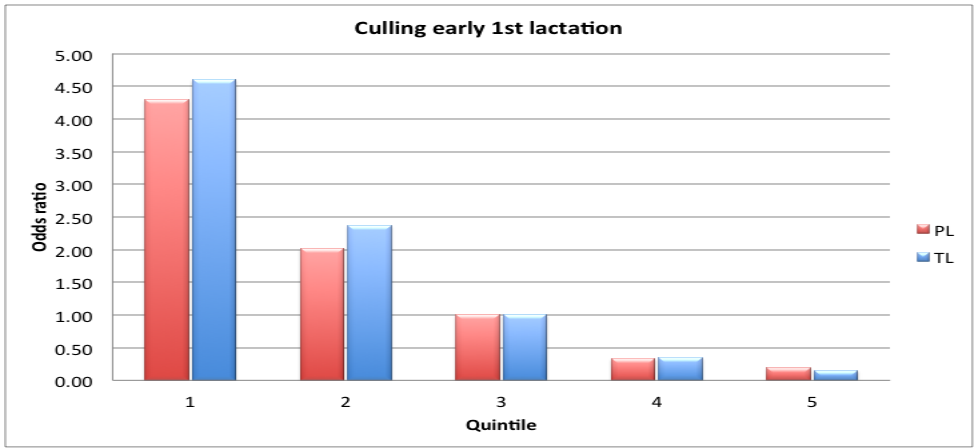

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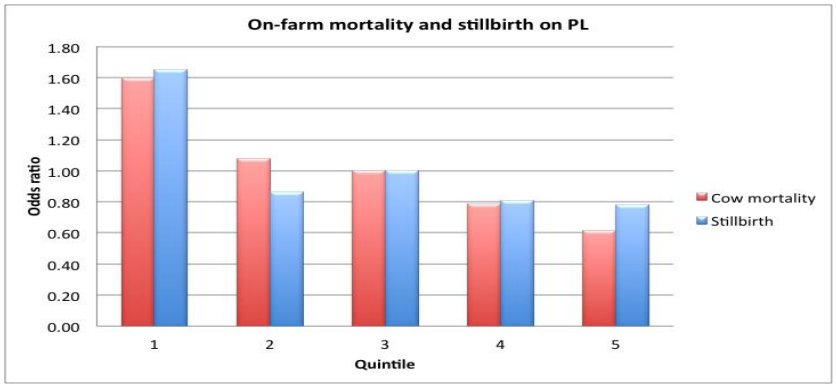

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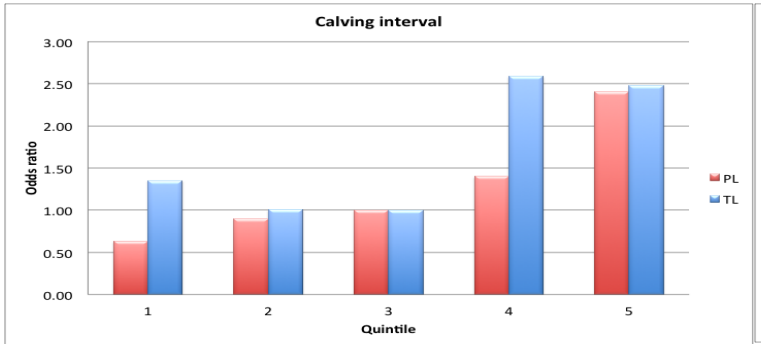
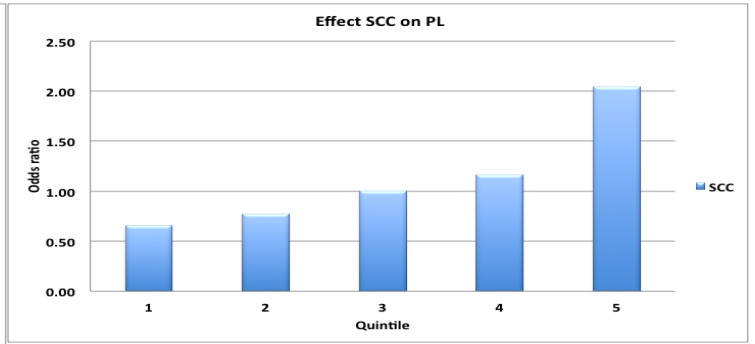
- Overemphasis on short CI or low SCC can give low PL/TL





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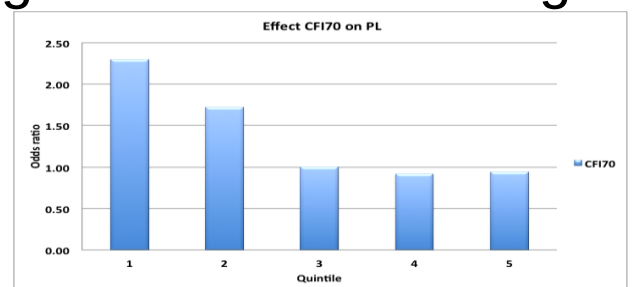

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Thank you for listening

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