

# **The effect of Startvac® vaccination on udder health under Icelandic conditions.**

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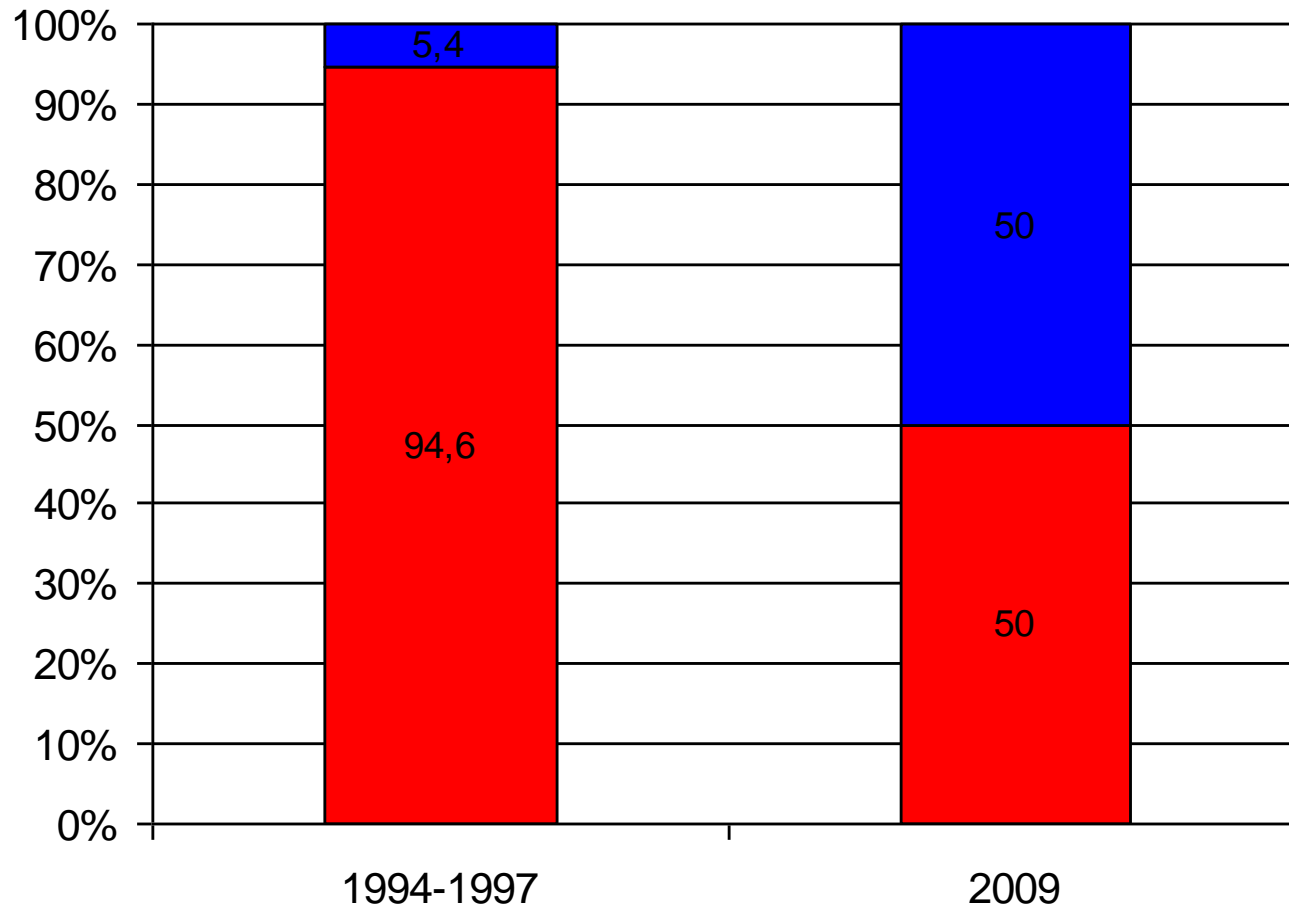
# The Icelandic cow

- **An old landrace brought to Iceland with the Nordic settlers in the 9<sup>th</sup> century. More or less isolated since then.**
- **Fluctuations in number due to climatic variations and volcanic eruptions . Lowest approx. 10.000 in 1784 after a volcanic eruption**
- **Av. herd size 40 cows. 600 farms.**

# The Icelandic cow

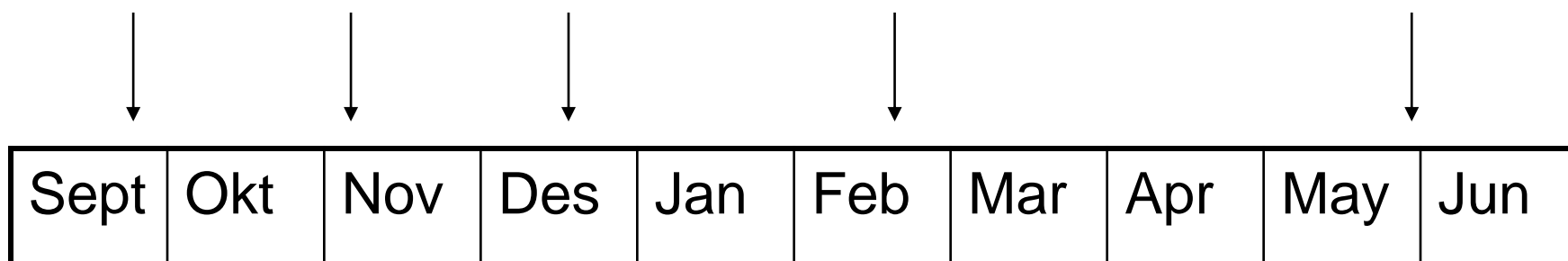
- Herd recording started in 1903. Now 90 % of the population in recorded herds.
- Artificial insemination started in 1947.
- Typical Dairy Breed
  - Body weight: 500 kg.
  - Annual yield:
    - Milk: 5.600 kg
    - Protein cont.: 3.35 %
    - Fat cont.: 4.05 %
    - SCC 220

# Tie stalls v free stalls



# Materials and Methods

- 7 dairy farm with 320 cows
- 2 years, year 1 control, year 2 vaccination
- Vaccination programme



# Materials and Methods

- Infection prevalence before and after as measured by quarter sample culturing
  - Staph aureus
  - CNS coagulase negative staphylococcus
  - E coli
- Somatic cell count SCC
  - Bulk milk
  - Cow samples
- Incidence of clinical mastitis cases

# Infection prevalence

## Staph aureus

Farm	Year 1 Control	Year 2 Startvac
A	9,6 % of teats	16,1 % of teats
B	44,2 %	41,0 %
C	5,3 %	3,8 %
D	4,3 %	4,9%
E	9,6 %	1,8 %
F	5,5 %	2,9 %
G	4,6 %	1,3 %
All	15,9 % n=940	13,7 % n=992
P>0,10		

# Infection prevalence – CNS

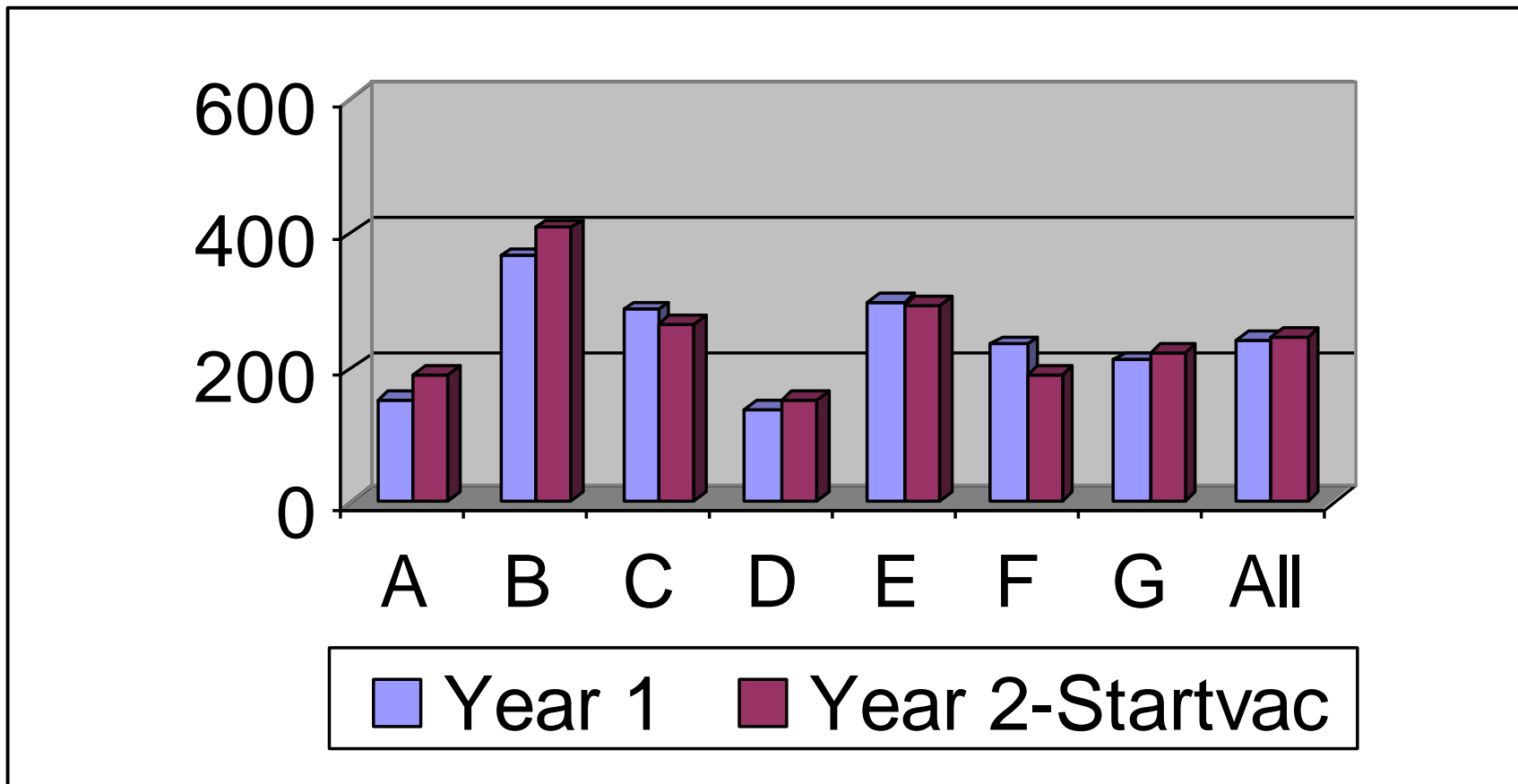
<b>Farm</b>	<b>Year 1 Control</b>	<b>Year 2 Startvac</b>
A	34,6 % of teats	28,2 % of teats
B	29,9 %	18,8 %
C	57,9 %	47,5 %
D	34,0 %	56,9 %
E	27,9 %	23,2 %
F	37,5 %	30,1 %
G	14,8 %	10,5 %
All	31,8 % n= 940	31,0 % n = 992
P> 0,10		



# Infection prevalence – E coli

	Year 1 Control	Year 2 Startvac
All	1,0 % of teats	2,4 % of teats

# SCC in bulk milk



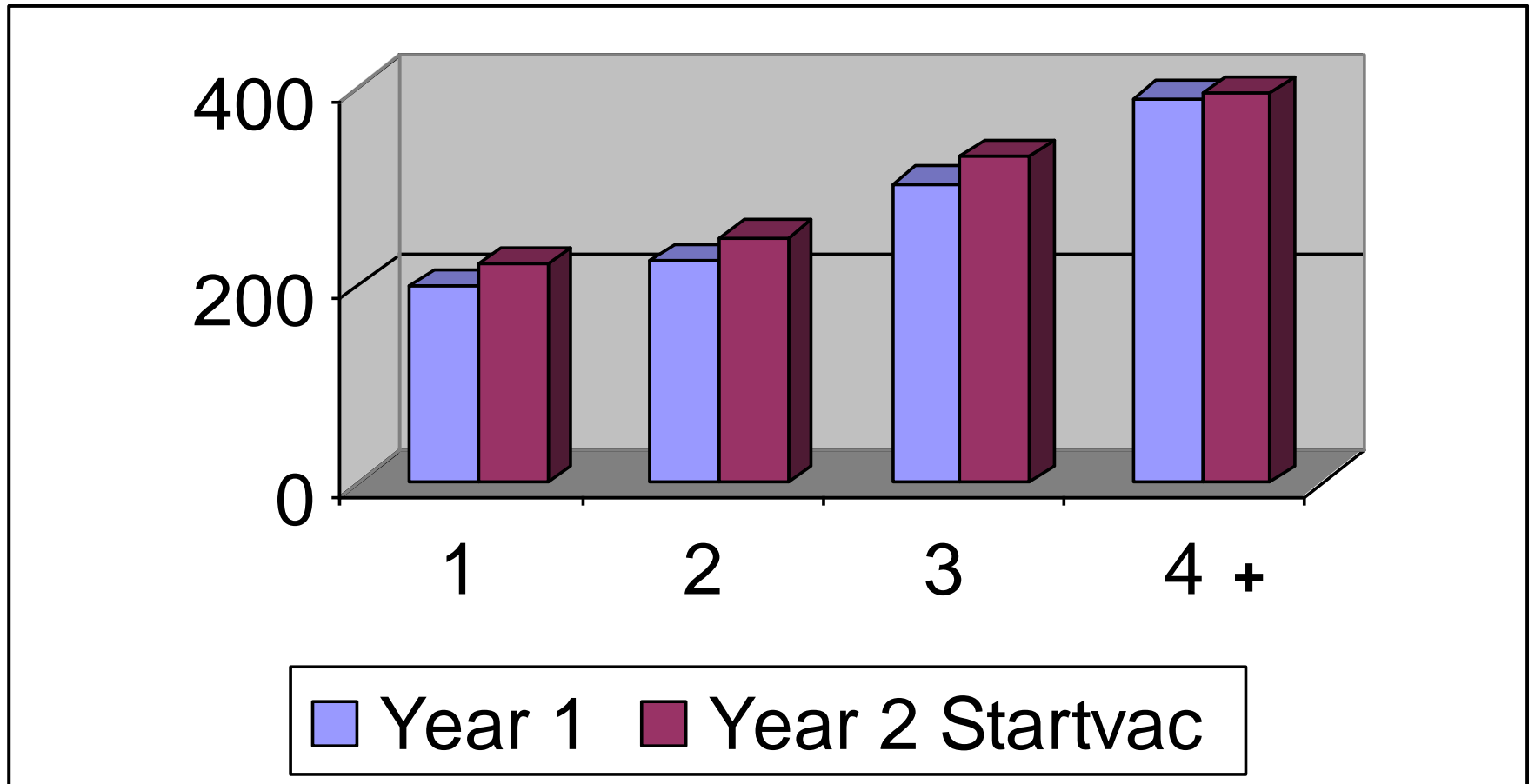
# SCC in bulk milk

Farm	Year 1 – Control	Year 2 – Startvac
A	153,7	189,5
B	366,4	408,3
C	286,3	263,9
D	137,7	152,8
E	296,1	292,1
F	234,1	191,3
G	211,0	222,9
Mean	240,73	245,8
P between farms <0,0001		
P between years > 0,10		

# SCC and lactation number

Lactation number	Year 1 – Control	Year 2 – Startvac
1	198,1	220,5
2	224,2	248,4
3	303,1	330,2
4+	388,4	393,8
P between lactation number < 0,0001		
P between years > 0,10		

# SCC and lactation number



P between lactation number < 0,0001

P between years > 0,10

# Mastitis incidence

Farm	Year 1 Control	Year 2 Startvac
A	20 54%	23 74%
C	4 11%	4 13%
D	4 7%	10 17%
E	29 68%	24 55%
F	16 35%	12 28%
G	19 52%	16 42%
All	92 36,4%	89 36,3%
P>0,10		

# Conclusion

- In this trial Startvac® vaccination did not have an effect on the parameters studied.
- Between farm variation for all parameters was considerable, emphasizing the importance of good farm management and strategic mastitis control.
- Acknowledgment:
  - The cattle development fund
  - Icevet ehf, Hipra Spain