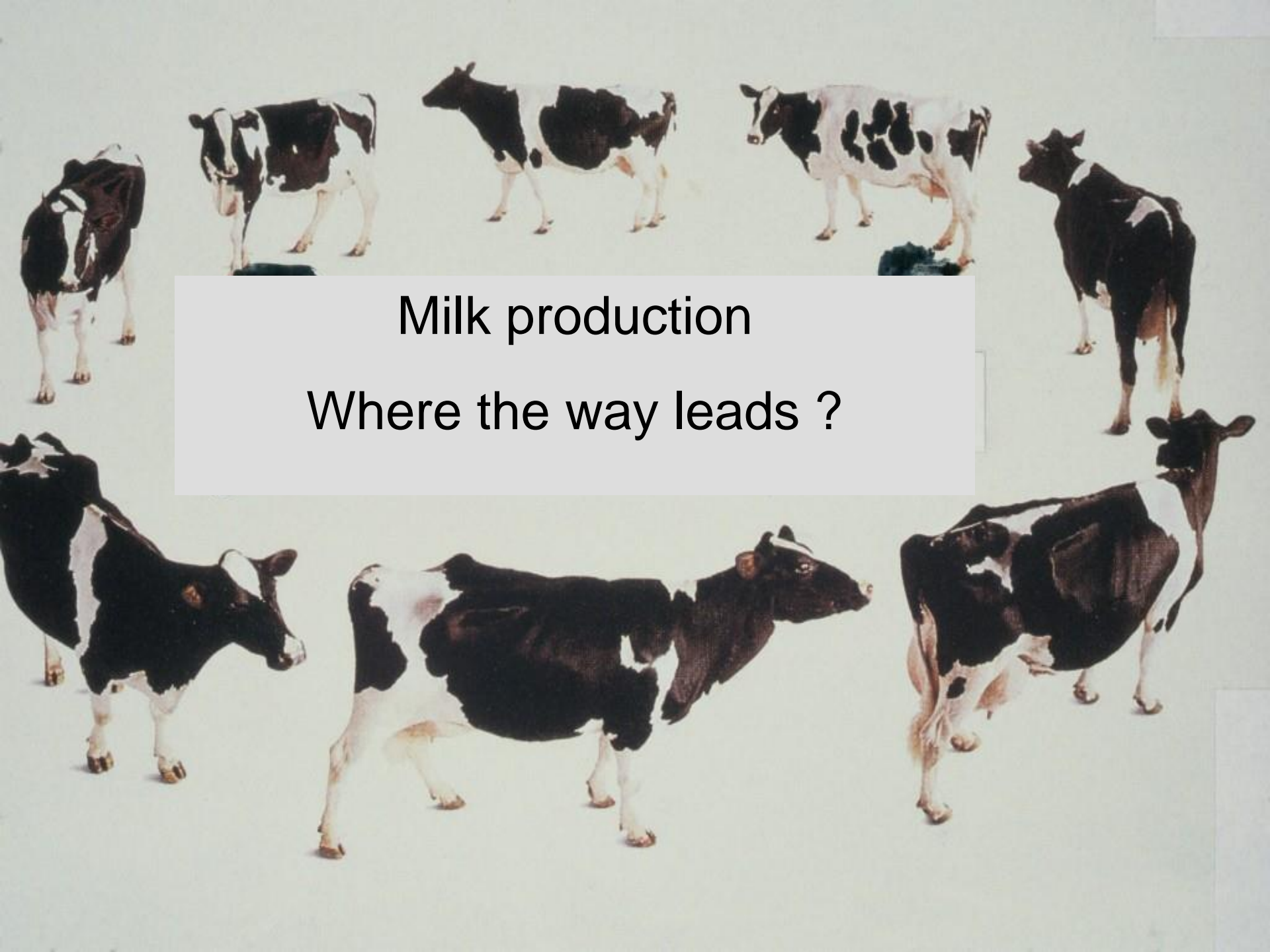


# How to consider fitness traits with growing herd sizes

**Heinrich Ruprecht**  
Stöckse, Germany



Milk production  
Where the way leads ?

# Milk production – farm average



Year	Cows	Milk kg	Fat %	Fat kg	Protein %	Protein kg	Calving intervall
1986	58	8.475	4,18	354	3,49	296	392
1991	158	7.889	4,12	325	3,38	266	397
1996	149	10.747	3,88	416	3,48	374	388
2003	180	10.470	3,84	402	3,45	361	388
2006	212	10.247	3,97	394	3,37	345	401
2008	247	10.095	4,07	409	3,42	345	410



*Hän Hopm*















## SUPPORTED BY



Organisme de Sélection  
**Prim'Holstein**



# Introduction of breeding values in Germany

<b>Trait</b>	<b>In DEU since</b>	<b>Interbull since</b>
<b>Milk, fat</b>	<b>1966</b>	1995
<b>Protein</b>	<b>1977</b>	1995
<b>Fertility</b>	<b>1987</b>	2007
<b>Calving Ease</b>	<b>1993</b>	2005
<b>Conformation</b>	<b>1993</b>	1999
<b>Somatic Cell Count</b>	<b>1996</b>	2001
<b>Functional Longevity</b>	<b>1996</b>	2004
<b>Milking Speed</b>	<b>2005</b>	2008

- Germany has a long tradition and experience in breeding value estimation – especially in functional traits



























Maggie Murphy





**Thank you for  
your attention!**