### Number of HF inseminations and number of

### Semen Collection Centers in Denmark 1950-1998

	HF r	egisti	rated	cows	- mill	k yield	d – no of in		nations	
	Milk	Fe	dt	Prot	ein	Kg	Registrat cows	ed		ns.
0	kg	%	kg	%	kg	F+P	number	%	Number	r %
1950	3.872	3,92	152	-	-	-	94.294	11,5	93.430	12,1
1 1960	4.484	4,02	180	-	-	-	110.336	12,9	432.164	26,7
1970	4.927	3,98	198	-	-	-	241.785	40,3	632.392	45,6
1980	5.528	3,98	220	-	-	-	402.624	56,2	718.537	62,9
1985	6.430	4,05	260	3,32	213	472	384.713	59,3	685.046	64,8
1990	7.143	4,21	301	3,30	235	536	369.610	63,2	577.432	67,0
1995	7.384	4,22	311	3,35	247	558	402.462	67,3	550.623	71,5
2000	8.075	4,10	331	3,37	272	603	399.245	69,5	530.995	73,6
2005	9.122	4,12	376	3,38	308	684	366.757	72,2	475.642	74,2
2006	9.232	4,12	380	3,35	309	689	366.084	72,3	474.967	73,8
2007	9.372	4,05	380	3,35	314	694	361.517	72,7	484.143	73,7
2008	9.379	4,07	382	3,33	312	694	367.875	72,6	504.346	73,9

## Today

### • HF registrated cows - milk yield – no. of inseminations

-		Milk	Fe	edt	Protein		Kg	Registrat	Registrated		s.
		kg	%	kg	%	kg	F+P	cows Number	%	Number	%
	2000	8.075	4,10	331	3,37	272	603	399.245	69,5	530.995	73,6
	2005	9.122	4,12	376	3,38	308	684	366.757	72,2	475.642	74,2
	2006	9.232	4,12	380	3,35	309	689	366.084	72,3	474.967	73,8
	2007	9.372	4,05	380	3,35	314	694	361.517	72,7	484.143	73,7
	2008	9.379	4,07	382	3,33	312	694	367.875	72,6	504.346	73,9
	2009	9.504	4,10	390	3,36	319	709	373.333	72,3	511.368	73,3
	2010	9.576	4,09	392	3,36	322	714	376.029	72,1	513.330	73,3
	2011	9.419	4,11	387	3,37	317	704	371.467	71,9	529.534	73,0
	2012	9.529	4,09	390	3,38	322	712	370,569	71,2	531.412	72,5
	2013	9.661	4,09	395	3,38	327	722	363.282	70,8	523.564	72,6

2

### Number of milk recorded cows

	Denmark	Sweden	Finland	In total
Holstein	376,000	147,500	78,200	601,700
Jersey	65,000	2,000	-	67,500
VikingRed	38,500	122,000	147,200	307,700
Red Holstein	5,800	-	-	5,800
SKB/Finncattle	-	1,200	2,800	4,000
Total	485,300	272,700	228,200	986,200
<b>A</b>		Averag	e Herd size	



Holstein





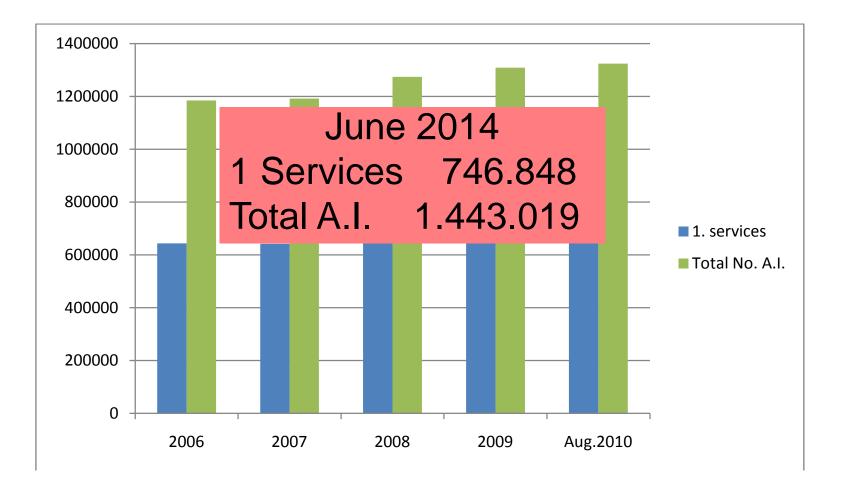
Viking

Denmark 150 Sweden 70 32 Finland



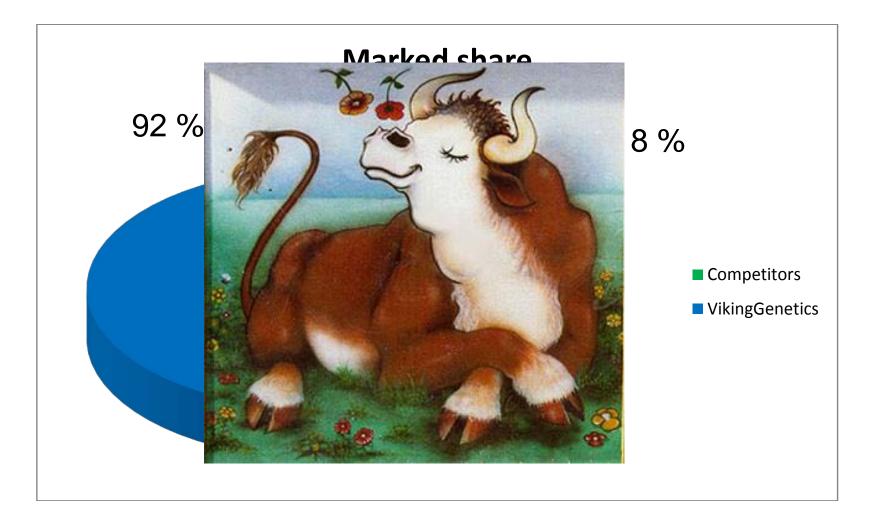
vikinggenetics.com

### Development in the No. of A.I. in DK





### Competitors on the domestic market







# Genomisk selektion

- One of the most revolutionary changes i cattle breeding since artificial insemination.
- Research program
  - o Aarhus Universitet, VikingGenetics, FABA & NAV
- Up to 50% extra breeding progress .



### From calf to elite bull – many steps of selection

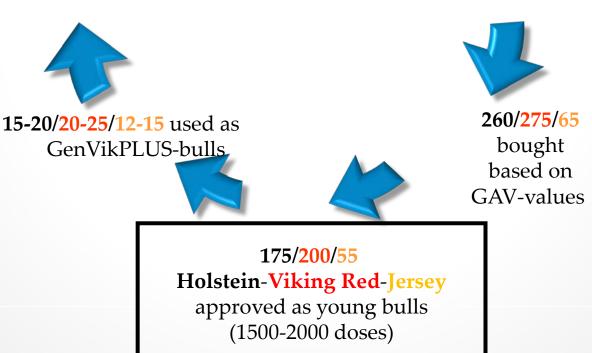


10-15 best approved as elite bulls

All born calves in screening



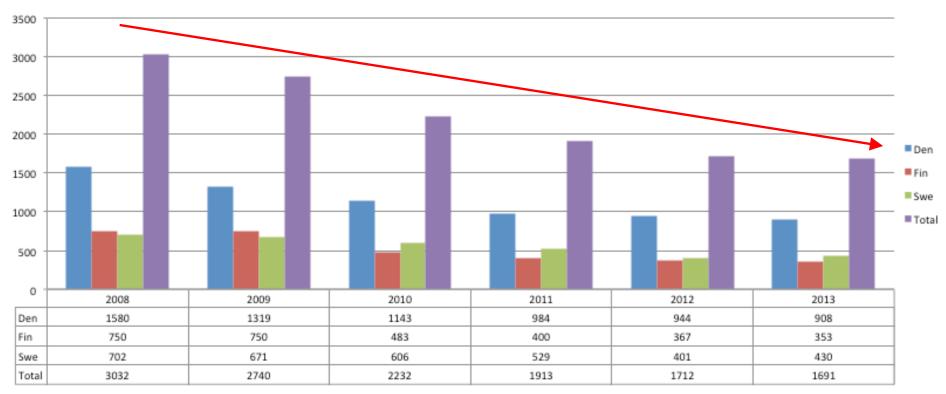
Registration of daughters for 4 years = breeding values for the bulls 1.800 / 2.000/300 selected based on NTM, and genomically tested



### Number of bulls is declining

### PRODUCTIVITY

### Number of bulls 2008-2013



## GVP bulls taking market from PB AVAILABILITY

- PB is about 1100 doses/ejaculate
- YB/GVP is about 300 doses/ejaculate
- 4 times more collections and lots



kinggenetics.com

# Breeding value publications



#### NEWS

"Old Bosse" close to 180,000... VH Grafit - Hall of Fame 2014 VH Miracle heifer with gNTM... Meet us at EUROTIER ProCROSS sire Peterslund Chinese interest in VikingRed New CEO in VikingGenetics VikingNews 3-14 is now available... Cooperation between NOG and...

#### NEWS ARCHIVE

NAV BULL SEARCH



#### MEET VIKINGGENETICS AT

Eurotier 11-14 November (stand G49 in hall 27)
Agromek 25-28 November - program - registration



#### THE VIKING WORLD





#### "OLD BOSSE" CLOSE TO 180,000 KG MILK

Friday 26 September the participants in the annual Holstein meeting in Denmark had the oppotunity to see the cow "Old Bosse"... •



#### VH GRAFIT - HALL OF FAME 2014

Friday 26 September VH Grafit was nominated "Hall of Fame 2014" at the Holstein annual meeting.



#### OPEN DAYS AND EXPO AGROMEK

VikingGenetics is proud to invite you to Open Days and Expo Agromek 25 - 28 November 2014. Find the invitation and link...

# Breeding value publications



# Breeding planning

CKR-dyrnr	NTM Y	Far	Sidste	Forslag 1	Forslag	r 2	Fors	ag 3
onn-uyrni	Ind	FUL	kælvning	rorbray r	FOIDIA	, -	20101	ag 5
02228	-3 90	V Bojer	16.11.13	HOL-ungtyr				
02423		VAR Calano	13.10.13	HOL-ungtyr				
02804	5 97 1	D Congo	29.06.14	VH Oxel	VH	Finka	VH	Cupid
02960		V Exces	25.01.14	VH Oxel	VH	Mookie		-
03069	19 112 1	V GroovyBL		Election	VH	Barkley	VH	Cupid
03105	13 101	V GroovyBL	12.11.13	Nilson	VH	Oxel	VH	Finka
03144	4 98 1	D Milano	05.04.14	HOL-ungtyr				
03171	-1 90	V Epos	17.11.13	HOL-ungtyr				
03184	2 99 1	D Banker	25.09.13	HOL-ungtyr				
03219	12 108 1	D Banker	31.01.14	VH Clement	VH	Mookie	VH	Barkle
03263	15 110 1	D Banker	05.10.13	VH Clement	VH	Cupid	VH	Op
03269	16 114	V Exces	04.01.14	VH Clement	VH	Merit		
03293	-2 96	VAR Hector	15.05.14	HOL-ungtyr				
03338	-6 101	V Erry	26.08.14	HOL-ungtyr				
03354	6 97 1	D Corinth	25.08.13	VH Marley	VH	Cupid	VH	Op
03362	6 97	VH Ragn	03.07.14	VH Montee	VH	Op	VH	Cupid
03376	2 104	VH Lago	01.07.14	HOL-ungtyr				
03379	12 114 1	D Sammy	05.09.13	VH Montee	VH	Cupid	VH	Op
03407	12 105 1	Rakuuna	17.02.14	VH Clement	VH	Cupid		
03409	6 109 1	D Palm	21.01.14	VH Montee	VH	Grafit	VH	Op
03418		D Dundee	10.05.13	VH Montee				
03449		VH Marcel	03.09.14			Barkley		Cupid
03472		D Onsild	08.04.13		VH	Cupid	VH	Op
03486	10 110 3	S Ross	30.07.14	VH Gizmo				

# Semen pricing

Stbg. Nr.	Navn	NTM	Info	Far x morfar	Pris	Bestil
256775	VH Oxel	38	G	VH Op x D Orange	Kr. 117,00	0 📮
256732	VH Mindoro	38	G	VH Miracle x Ramos	Kr. 117,00	0 💐
255962	VH Boogie	38	G	Bookem x Man-O-Man	Kr. 117,00	0 🐺
256800	VH Gizmo	37	G	G-Force x D Onside	Kr. 117,00	0 💐
256184	VH Reynold	37	G	Ramado x Man-O-Man	Kr. 117,00	0 🐺
256615	VH Fiery	36	G	VH Fanta x VH Oyvind	Kr. 117,00	0 💐
256209	VH Clement	36	G	CM x Juwel	Kr. 117,00	0 📮
256205	VH Ponder	36	G	VH Peder x D Onside	Kr. 117,00	0
256795	VH Mace	35	G	D Mason x D Onside	Kr. 117,00	0 📮
255788	VH Jaywalk	35	G	D Jul x Oman Justi	Kr. 117,00	0 💐
256786	VH Finka	34	G	Fexter Cap x Man-O-Man	Kr. 87,00	0 📮
256595	VH Mookie	34	G	VH Mota x S Ross	Kr. 87,00	0
256203	VH Laredo	34	G	Levi x Man-O-Man	Kr. 87,00	0 📮
256198	VH Merit	34	G	VH Meno x D Onside	Kr. 87,00	0 💐
256584	VH Montee	33	G	VH Mandel x VH Bismark	Kr. 87,00	o 🐺

# Semen Pricing. VikingGenetics.

	\$	Indian Rupee
Sire of Sons	34	2090
Bulls NTM ≥35	20	1225
Sexed	37	2300
Bulls NTM<35	15	910
Sexed	29	1800
Young Bulls	8	490

Inseminator visit171050Per insemination4,5275Pregnancy test3175

# Legislation

- EU 88/407
- National Laws on top of EU 88/407

- Company requirements
- Export Requirements.

# Prequarantine

- Done on farm or facility owened by Semen center.
- Test within 28 days before starting Quarantine:
  - o IBR
  - o BVD virus and antibody
  - o Leucosis
  - o Brucellosis
  - o TB
  - o Normal testicles
  - o Umbilicus hernie.

# Quarantine test

- More than 21 days after entering Quarantine.
  - o IBR
  - o BVD virus and antibody
  - o Leucosis
  - o Brucellosis
  - o Campylobacter
  - o Trichomonas

# Yearly tests

- o IBR
- o BVD virus and antibody
- o Leucosis
- o Brucellosis
- o TB
- o Campylobacter
- o Trichomonas

# Test for Export outside EU

- Bluetongue
- Q-Fever
- Leptospirosis
- Schmallenberg
- Johne´s disease