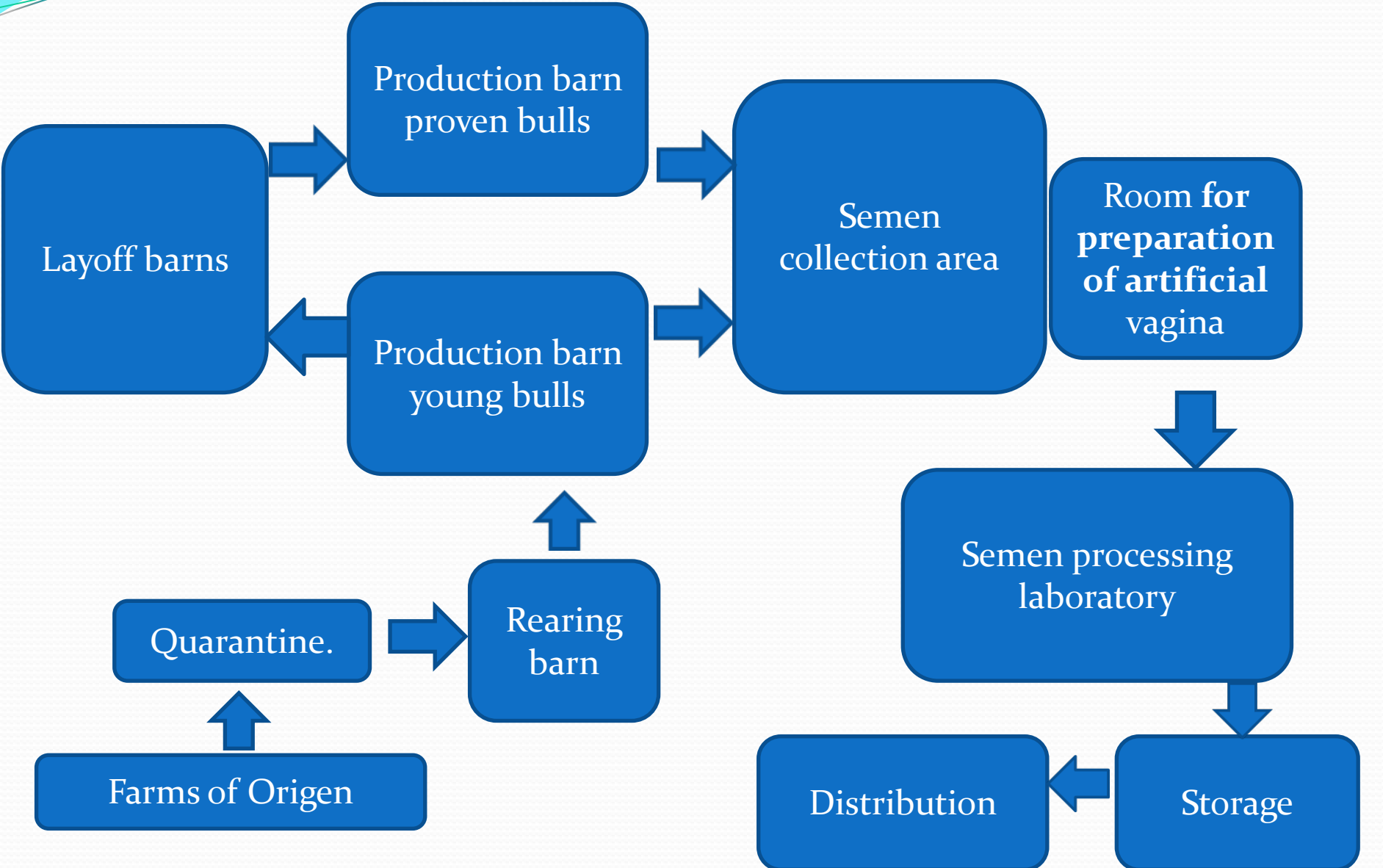


Design of semen collection center and bull management.

Kaj Abrahamsen

DVM

VikingGenetics



Semen collection area.



Bull and teaser relations.



Bull and semen collector relations





The diagram illustrates a farm layout with a green field and a white building. A large brown arrow labeled 'Manure' points from the building to the field. A green box labeled 'Feeding' has an arrow pointing to the building. The building has a grid of windows and doors. Dimensions 4000 and 3000 are marked on the left side of the building. A small box with the number 15 is located near the bottom left of the building. A small box with the number 20 is located near the bottom center of the building. A blue line runs along the top of the building. A blue line runs along the bottom of the building. A blue line runs along the right side of the building. A blue line runs along the left side of the building. A blue line runs along the top of the field. A blue line runs along the bottom of the field. A blue line runs along the right side of the field. A blue line runs along the left side of the field.

Manure

Feeding





Proven Bull $4 \times 9 = 36 \text{ m}^2$

Single pen

Young Bull $3 \times 6 = 18 \text{ m}^2$



Common pen for layoff bulls.



Bull flow



Capacity.

- Breeding strategy:
 1. Genomic selection
 2. Daughter proven Bulls.

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



15-20 / **20-25** / **12-15** used as
GenVikPLUS-bulls

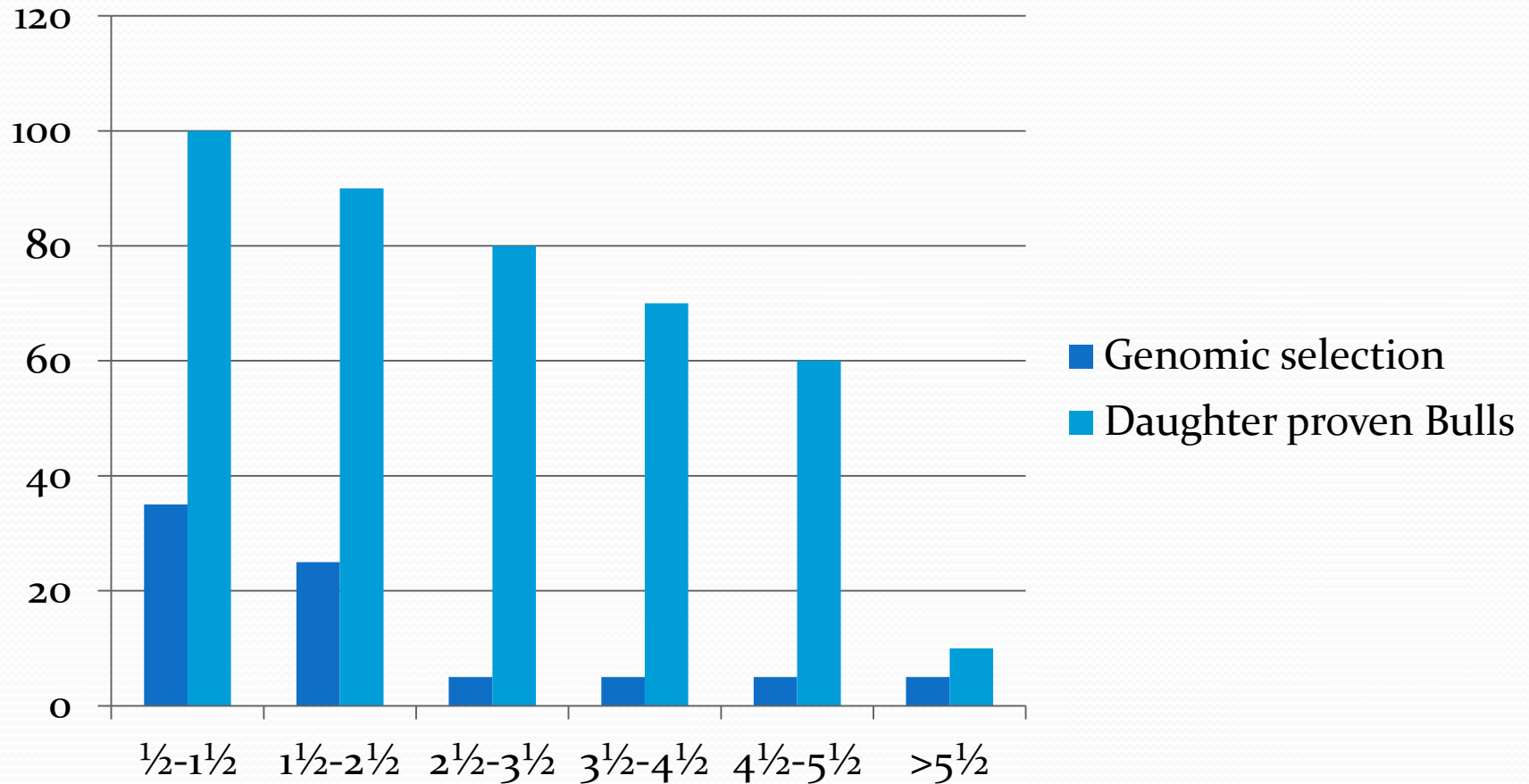


260 / **275** / **65**
bought
based on
GAV-values



175 / **200** / **55**
Holstein-Viking Red-Jersey
approved as young bulls
(1500-2000 doses)

Capacity:



Genomic selection: ~ 80 places

Daughter proven: ~ 410 places

Capacity/Production goal: 1.000.000 straw/year

- Daughter proven Bulls:

- Young Bull 1-1½ year: 2.000 doses 100 bulls
- Proven Bull >5 years: 150.000 doses 5 bulls

- Genomic selected Bulls:

- 1 – 2½ year: 20.000 doses 30 bulls
- 2½- >100.000 doses. 5 bulls

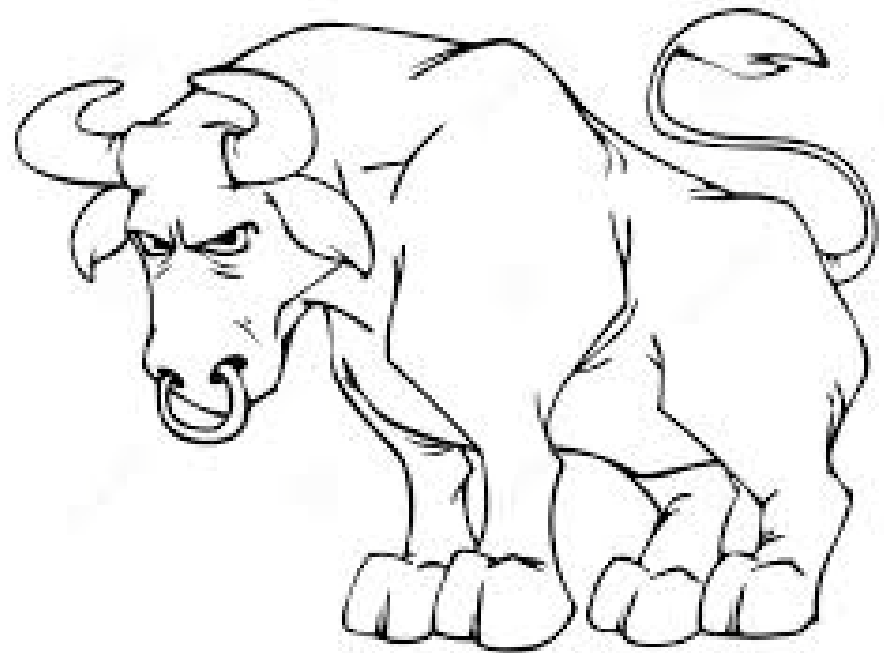
Bull behavior.

- Relationship bull – bull
- Relationship bull – bull handler

Relationship Bull – Bull



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Relationship Bull – Bull

Different types of Bulls:

- Dominant
- Aggressive
- Lieutenant
- Fearful
- Submissive

Other issues:

- Neighbors in pence
- Avoid moving bull to new location too often
- Environmental factors can cause stress (temperature, water, noise, traffic,...)

Bull – Bull handler



Bull – Bull handler

- Positive and negative stimulation
 - Negative stimulations are only used for security reasons.
- Trained routines - A Bull can be trained
- Bull welfare
 - Bulls with aggressive or fearful behavior have to be handled intensively to be more confident with barn staff.
 - Bull welfare are time consuming in the beginning but pays back later on.

Positive and negative motivation.

Imprint to obtain a specific behavior.

Sensitive periods : 0 – 14 days old.

Puberty: 8 – 12 month old.

Behavior based on stimulus and response.

Socialisation to his own kind are less likely to attack people.

Bio-security

External health status

Internal health status



Fencing around the entire facility

Quarantine and rearing facility.



Quarantine and rearing facility.



External Health status

- Surveillance programs
 - Milk test program and Slaughter house programs
 - M&K
 - IBR
 - BVD
 - Leucosis
 - Brucellosis
 - Salmonella Dublin
 - Q-Fever
 - Johne's disease
 - Governmental Veterinary teams
 - Lokal Veterinary teams
 - Farmers are obligated to report.
 - Eradication program



TO WHOM IT MAY CONCERN /
TIL HVEM DET MÅTTE VEDRØRE

ZOO-SANITARY STATEMENT / ZOO-SANITÆR ERKLÆRING

The Danish Veterinary and Food Administration hereby certifies the following status in Denmark in relation to outbreak of notifiable diseases according to the list below: / Fødevarestyrelsen attesterer hermed følgende status i Danmark for så vidt angår udbrud af anmeldeligt smitsomme husdyrsygdomme i henhold til nedenstående liste:

Notifiable disease / Anmeldepligtig sygdom	Latest recorded / Seneste forekomst
Foot- and mouth disease / Mund- og klovesyge	1983
Vesicular stomatitis / Vesikulær stomatitis	Never recorded
Swine vesicular disease / Smitsom blæreudslæt hos svin	Never recorded
Rinderpest / Kvægpest	1782
Peste des petits ruminants / Fåre og gedepest	Never recorded
Contagious bovine pleuropneumonia / Oksens ondartede lungesyge	1886
Lumpy skin disease / Lumpy skin disease	Never recorded
Rift Valley fever / Rift Valley fever	Never recorded
Bluetongue / Bluetongue	November 2008
Sheep pox and goat pox / Fåre- og gedekopper	1879
African horse sickness / Afrikansk hestepest	Never recorded
African swine fever / Afrikansk svinepest	Never recorded
Hog cholera / Klassisk svinepest	1933
Highly pathogenic avian influenza/ Højpatogen Aviær influenza (HPAI)	May 2006
Newcastle disease / Newcastle disease	October 2005

On behalf of
The Danish Veterinary and Food Administration/
På Fødevarestyrelsens vegne

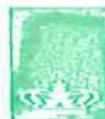
Ernst H. Andresen
Ass. Regional Veterinary Officer

Ref.:

[Signature] 801013



La 23,0-2148



Ministry of Food, Agriculture and Fisheries
Danish Veterinary and Food Administration
Region West
Veterinary Control Office North
Sofieendalsvej 90, 9200 Aalborg SV
Tlf. 72 27 50 00 - Fax 72 27 50 03

Eradication program

- Bulk milk test to point out infected herds
- Milk recording 11 times per year
- Milk test done on individual cows
- Blood test on non lactating animals



Eradicated Diseases

- TB 1956
- Brucella Abortus 1962
- Rabies 1982
- Leucosis 1990
- IBR 1991
- BVD 2007
- BSE 2008

Eradication program ongoing:

- Mandatory:
 - Salmonella Dublin finalized 2017
- Voluntary:
 - Johne's Disease finalized 2020

Thank You for your attention.



D Oscar