Breeding values for beef bulls used on dairy cows

NAV workshop

Copenhagen, January 2014

Anders Fogh

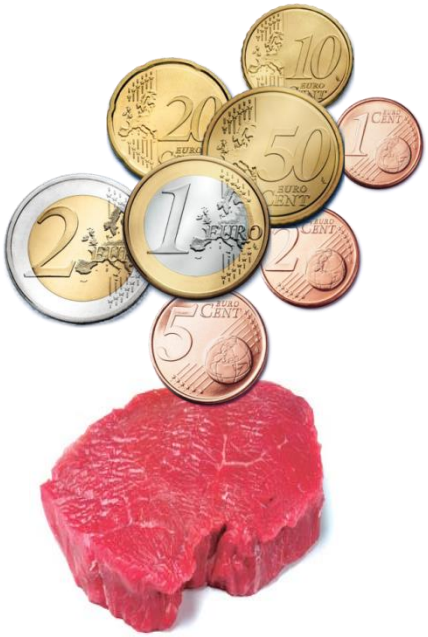
Ministeriet for Fødevarer, Landbrug og Fiskeri
Den Europæriske Landbrugsfond for Udvikling af Landdistrikterne
Naturerhverv.dk
Danmark og EU investerer i landdistrikterne.
Se "European Agricultural Fund for Rural Development" (EAFRD)

STØTTET AF
mælkeafgiftsfonden

Dairy farmer's choice of bull

- to maximize economy in production of slaughter calves

?



2013: 45.000 inseminations

NAV

X-index is a breeding value that helps Danish dairy farmers to select beef sires that produce the economically best crossbred calves

Beef bulls are compared across breeds

Beef indices available today

- Pure beef breed trait (LIM x LIM) – not genetically same trait as crossbreed trait (LIM x HOL)
- Expressed on individual breeds own scale – not comparable across beef breeds

Basis for crossbreed breeding values

- Breeding values for ”Beef x Dairy” trait within breed – correlated trait in present beef evaluation (genetic level of bulls within breed)

- Results for crossbred calves (phenotypic levels between breeds – scale genetic level between breeds)

Traits in X-index

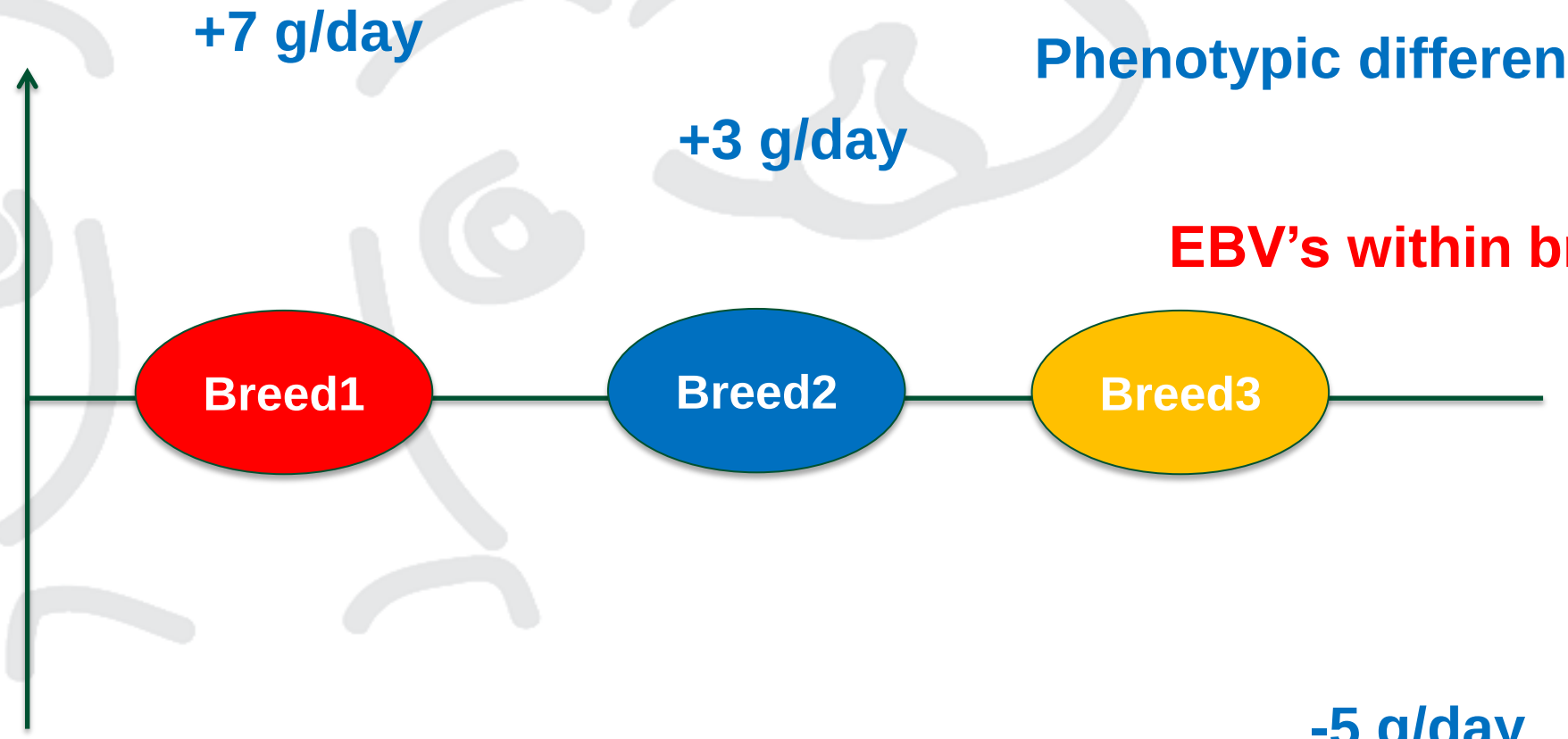
- g/daily net gain
- EUROP classification
- Still birth
- Calving ease

- Traits important for production of slaugther calves – from calving to slaughter

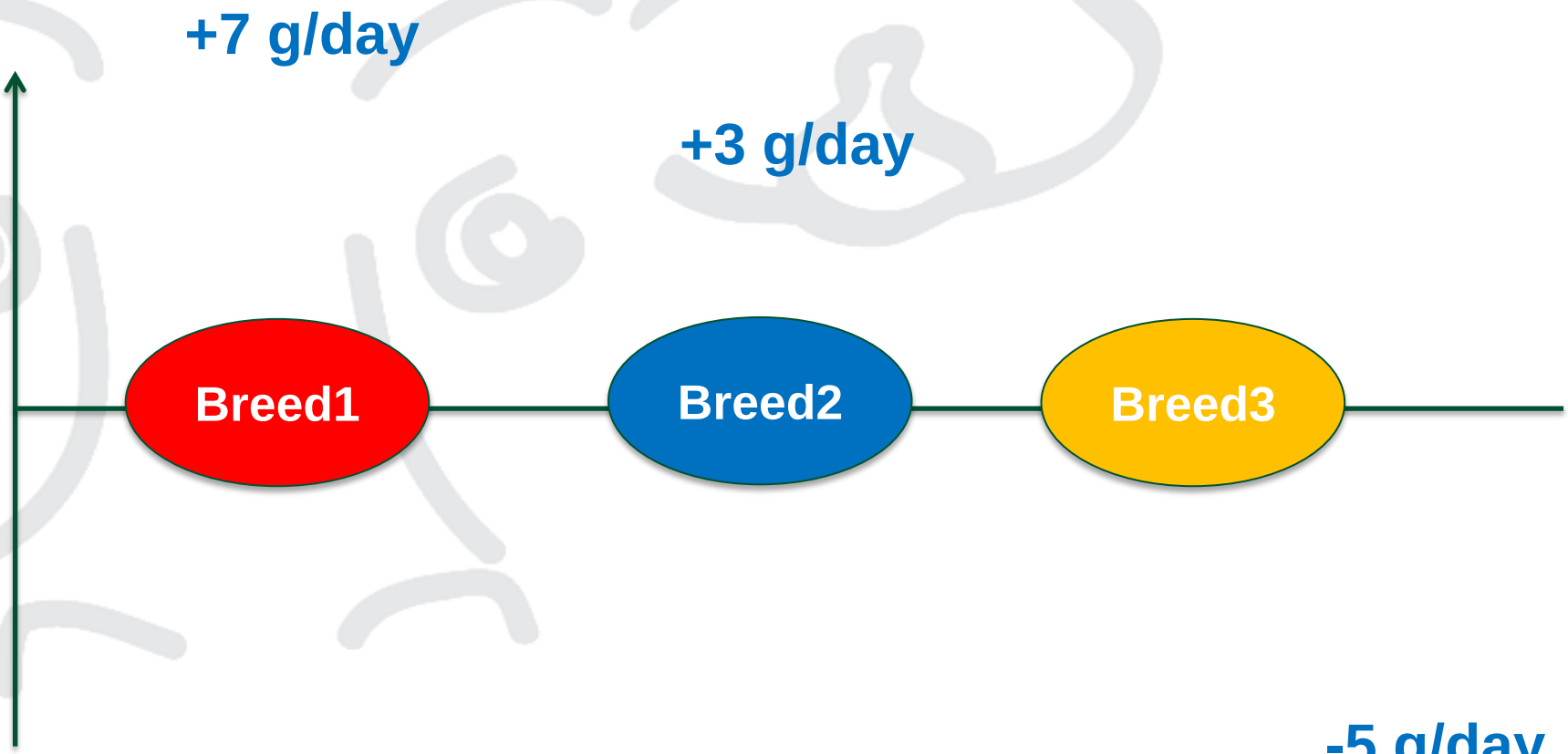
”3 step calculation”

- Correction to standard calf - To avoid phenotypic differences caused by selected use
- Phenotypic levels of breeds for base population – Minimum 10 bulls per breed
- Breedwise adjustment of genetic level with phenotypic differences

Example: daily weight gain



Example: daily weight gain



EBV's adjusted with phenotypic differences

From EBV to X-index

- Economic weights
- 2 economic indices
  - Dairy farmer – all traits
  - Calf producers – only slaughter traits
- Publication twice a year

Name	X – D Kroner	X – S Kroner	Weight gain Gram	EUROP Class	Still birth % live	Ease class
Bivouac	219	197	38	1,7	0,8	0,03
Tornado	215	151	39	0,5	1,5	0,2
Ugo	200	166	35	1,2	0,3	0,17
Lucas	196	175	37	1,2	0,4	0,09
VINCENT	194	222	51	1,2	-1,2	-0,03
Tallboy	193	188	33	1,9	0,3	-0,01
Urbanus	178	166	31	1,5	1	-0,05
BREJ LASSE	163	101	20	0,9	2,2	0,11
Valentin	161	175	32	1,6	-0,4	-0,03
Fripon	154	135	30	0,8	0,5	0,04