

## Explanation of input parameters for economic values for YSS in NBDI

### Phenotypic levels

Parameters that are based the same data set from Sweden:

- Percentage of bull and heifer calves slaughtered before they are one year old
- Average age at slaughter in days
- Average daily net gain in kg per day
- EUROP form score (scale 1-15)
- EUROP fatness (scale 1-15)
- Percentage of stillborn bull and heifer calves, 2nd+ cows
- Calving ease

The other input parameters are based on values delivered by NAV co-workers from the three individual countries.

### Prices

Average exchange rate in Copenhagen for December 2021 (Source: Danmarks Nationalbank)

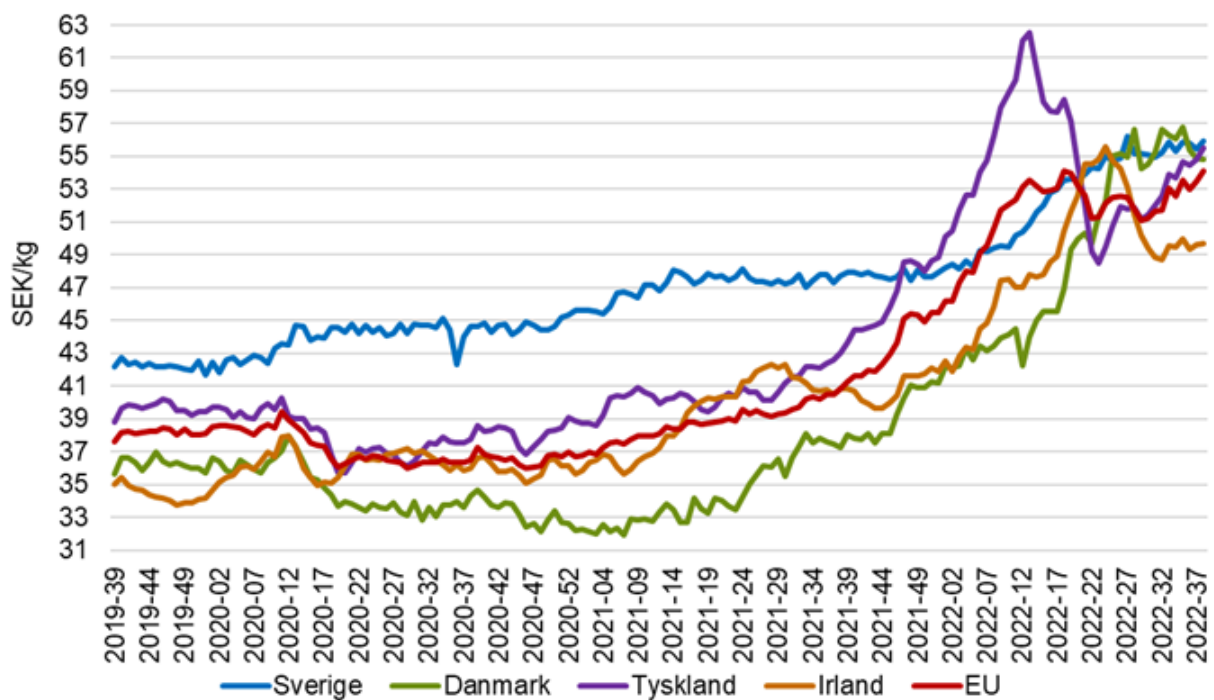
100 EUR = 743.625 DKK

100 SEK = 72.401 DKK

Exchange rate SEK/DKK for december 2021:  $100 / 72.401 = 1.3812$  SEK/DKK

Exchange rate EUR/SEK for december 2021:  $72.401 / 743.625 = 0.0974$  EUR/SEK

Avräkningspriser ungtjurar R3 3 år bakåt, SEK/kg



We assume a difference of 6.5 SEK/kg between Denmark and Sweden in December 2021.

Danish prices for young bulls and heifers in SEK:  $27,85 \text{ DKK/kg} * 1.3812 \text{ SEK/DKK} = 38.47 \text{ SEK/kg}$

Assumed Swedish prices for young bulls and heifers in SEK:  $38.47 \text{ SEK/kg} + 6.5 \text{ SEK/kg} = 44.97 \text{ SEK/kg}$

Assumed Swedish prices for young bulls and heifers in EUR:  $44.97 \text{ SEK/kg} * 0.0974 \text{ EUR/SEK} = 4.38 \text{ EUR/kg}$

	Previous							New						
	DNK		SWE		FIN		DNK		SWE		FIN			
	HOL	RDC	JER	HOL	RDC	HOL	RDC	HOL	RDC	JER	HOL	RDC	HOL	RDC
Percentage of bull calves slaughtered before they are one year old	0.55	0.43	0.46	0	0	0	0	0.8	0.67	0.52	0	0	0	0
<b>BxD bull calves (slaughtered before they are one year old)</b>														
Average age at slaughter in days	286	290	296					299	307	313				
Average live weight at slaughter in kg	412	409	381					400	400	390				
Average slaughter weight in kg	224.6	224.5	203.9					210	210	195				
Average daily gain in kg per day	1.44	1.41	1.29					1.3	1.3	1.25				
Average daily net gain in kg per day	0.786	0.775	0.689					0.784	0.776	0.677				
EUROP form score (scale 1-15)	7.53	7.98	7.04					7.6	8.1	6.8				
EUROP fatness (scale 1-15)	2.3	2.31	2.34					2.4	2.4	2.4				
<b>BxD young bulls (slaughtered when they are older than one year)</b>														
Average age at slaughter in days	361	367	376	551	556	593	598	404	401	426	555	565	594	600
Average live weight at slaughter in kg	487	491	440	647	631	692	671	480	485	450				
Average slaughter weight in kg	273	279	237	356	352	385	378	255	260	235	367	359	411	403
Average daily gain in kg per day	1.36	1.35	1.17	1.18	1.14	1.17	1.12	1.25	1.25	1.2				
Average daily net gain in kg per day	0.76	0.764	0.633	0.659	0.645	0.655	0.637	0.703	0.707	0.613	0.661	0.636	0.683	0.663
EUROP form score	8.06	8.64	6.97	8.62	9.33	8.68	8.91	7.6	8.2	7	6.6	6.9	7.6	7.9
EUROP fatness	2.44	2.57	2.41	2.21	2.39	2.22	2.4	2.5	2.7	2.6	2.4	2.5	2.4	2.4
Percentage of heifer calves slaughtered before they are one year old	0.6	0.43	0	0	0	0	0	0.67	0.51	0.29	0	0	0	0
<b>BxD heifer calves (slaughtered before they are one year old)</b>														
Average age at slaughter in days	295	296	296					309	313	320				
Average live weight at slaughter in kg	371	369	287					400	400	390				
Average slaughter weight in kg	205	205	153					210	210	195				
Average daily gain in kg per day	1.3	1.2	1.0					1.25	1.25	1.2				
Average daily net gain in kg per day	0.695	0.695	0.516					0.68	0.671	0.57				
EUROP form score	6.81	7.45	5.5					6.8	7.4	6				
EUROP fatness	2.81	2.84	2.17					2.8	2.9	2.9				
<b>BxD young heifers (slaughtered when they are older than one year)</b>														
Average age at slaughter in days	382	402	423	703	714	501	514	443	449	456	710	721	514	522
Average live weight at slaughter in kg	433	450	405	581	568	451	441	490	500	460				
Average slaughter weight in kg	239	252	213	318	313	245	242	260	275	245	321	315	275	271
Average daily gain in kg per day	1.1	1.1	1.0	0.826	0.796	0.90	0.86	1	1.05	0.9				
Average daily net gain in kg per day	0.63	0.629	0.51	0.459	0.447	0.5	0.482	0.59	0.587	0.489	0.452	0.437	0.521	0.503
EUROP form score (scale 1-15)	7.1	7.63	6.3	7.1	7.63	7.1	7.63	7.1	7.6	6.2	6.2	6.6	6.1	6.4
EUROP fatness (scale 1-15)	2.99	3.14	2.98	2.99	3.14	2.99	3.14	3.1	3.2	3.1	3	3	2.8	2.8
<b>Use of sexed semen and information on newborn BxD calves</b>														
The probability that a BxD calf is a female	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.46	0.44	0.38			0.47	0.47
Average birth weight for heifer calves in kg	40	39	24	40	36	42.5	39.5	40	40	37				
Average birth weight for bull calves in kg	43	42	27	43	39	46.1	41.8	44	45	40				
Percentage of stillborn heifer calves, 2nd+ cows	2.5	2.1	3.1	1.6	1.6	3.2	4.1	0.025	0.021	0.029	0.021	0.02	0.033	0.037
Percentage of stillborn bull calves, 2nd+ cows	6.1	2.9	5.5	4.4	3.7	4.3	6	0.047	0.038	0.047	0.041	0.039	0.048	0.054
<b>Calving ease</b>														
Percentage of easy calvings without assistance, 2nd+ cows	78.1	86.8	86.1	89.6	90.5	76.7	75.8	84.09	90.70	90.45	90.65	91.80	81.87	81.70
Percentage of easy calvings with assistance, 2nd+ cows	16.9	10.5	9.6	6.9	7.7	18.2	18.3	12.49	6.74	6.91	6.58	5.94	13.59	13.92
Percentage of difficult calvings without veterinary assistance, 2nd+ cows	4.1	2.2	3.3	2.9	1.1	4.7	5.7	2.71	2.17	2.02	2.11	1.87	4.17	4.13
Percentage of difficult calvings with veterinary assistance, 2nd+ cows	0.9	0.5	1	0.6	0.7	0.4	0.2	0.71	0.39	0.62	0.65	0.39	0.37	0.25
<b>Mortality</b>														
Percentage of dead BxD heifer calves, 1-30 days old	4	3.6	5.8					4.49	3.77	7.51	2	2	2.1	1.7
Percentage of dead BxD heifer calves, 31-200 days old	4.3	5	5.3					5.94	6.55	9.54	3	3	2.8	3.5
Percentage of dead BxD bull calves, 1-30 days old	4.7	4.6	10					5.2	3.97	7.73	2	2	2.1	2
Percentage of dead BxD bull calves, 31-200 days old	6.8	6.9	6.5					7.02	7.77	11.71	3	3	3.7	4.3
Average age at death among the dead BxD heifer calves, 1-30 days old	12.2	13.1	13	11.9	12.8	13.1	13.5	13	14.8	14.4	13.31	14.28	14	14
Average age at death among the dead BxD heifer calves, 31-200 days old	94.3	99.7	90.5	100	100	76.6	86.8	103.2	107.6	99.6	92.06	92.36	85	95
Average age at death among the dead BxD bull calves, 1-30 days old	12	13.1	13.3	12	13.3	15.3	15.7	12.9	12.9	14	12.85	13.98	13	15
Average age at death among the dead BxD bull calves, 31-200 days old	94.3	99.7	90.5	100	100	76.6	86.8	105.9	101.6	103.2	87.23	86.91	100	95

The following input parameters relate to pricing and are stated per country and across breeds. These prices should be representative for the entire country and true for EUROP conformation score 5 (O) and EUROP fat score 3. New version is based on data for week 49 2021 for Denmark, December 2021 for Sweden and week 2 2022 for Finland

	Previous			New		
	Den	Swe	Fin	Den	Swe	Fin
<b>Prices for EUROP conformation score 5 and EUROP fat score 3</b>						
Bull calves in € per kg carcass	3.76	4.28	3.82	4.10		
Young bulls in € per kg carcass	3.45	3.98	3.52	3.75	4.38	3.27
Heifer calves in € per kg carcass				4.10		
Young heifers in € per kg carcass	3.12	4.2	3.01	3.75	4.38	2.7
<b>Additional prices and deductions depending on EUROP conformation score for bull calves</b>						
EUROP conformation score. Additional price (+) or deduction (-)						
1	-0.2	-0.47	-0.47			
2	-0.2	-0.47	-0.35	-0.91		
3	-0.2	-0.09	-0.18	-0.2		
4	-0.07	-0.02	-0.09	-0.1		
5	0	0	0	0		
6	0	0.02	0.04	0.01		
7	0	0.05	0.11	0.03		
8	0	0.07	0.18	0.04		
9	0	0.09	0.25	0.04		
10	0	0.14	0.3	0.04		
11	0	0.14	0.35	0.04		
12	0	0.14	0.4	0.04		
13	0	0.19	0.45	0.04		
14	0	0.19	0.5	0.04		
15	0	0.19	0.53	0.04		
<b>Additional prices and deductions depending on EUROP conformation score for young bull</b>						
EUROP conformation score, Additional price (+) or deduction (-)						
1	-0.49	-0.57	-0.45		-0.61	-0.45
2	-0.36	-0.57	-0.3	-0.67	-0.61	-0.3
3	-0.23	-0.09	-0.18	-0.23	-0.19	-0.18
4	-0.09	-0.02	-0.09	-0.11	-0.05	-0.09
5	0	0	0	0.00	0.00	0
6	0.09	0.02	0.04	0.11	0.02	0.04
7	0.11	0.09	0.13	0.21	0.15	0.13
8	0.17	0.12	0.23	0.32	0.17	0.23
9	0.19	0.14	0.33	0.34	0.19	0.33
10	0.21	0.19	0.39	0.36	0.24	0.39
11	0.23	0.19	0.45	0.37	0.24	0.45
12	0.26	0.19	0.5	0.39	0.24	0.5
13	0.29	0.24	0.55	0.41	0.29	0.55
14	0.31	0.24	0.6	0.43	0.29	0.6
15	0.34	0.24	0.63	0.44	0.29	0.63
<b>Additional prices and deductions depending on EUROP fat score for bull calves</b>						
EUROP fat score, Additional price (+) or deduction (-)						
1	-0.27	-0.27	0	-0.27		
2	-0.03	-0.05	0	-0.03		
3	0	0	0	0		
4	0	-0.13	-0.2	0		
5	-0.13	-0.67	-0.5	-0.13		
<b>Additional prices and deductions depending on EUROP fat score for young bulls</b>						
EUROP fat score, Additional price (+) or deduction (-)						
1				-0.17	-0.19	0
2				-0.11	-0.06	0
3				0	0	0
4				0	-0.12	-0.2
5				-0.13	-0.49	-0.5

Danish data from "Afregningsmodulet"

	Breed_gender	Weight at slaughter	Weight entering veal calf herd	Days in the veal calf herd	Live weight at slaughter	Days at slaughter	Daily gain	Net daily gain
Calves	RDMxKØD_m	226	60	274	412	295	1.3	0.714
Calves	HOLxKØD_m	227	60	269	418	290	1.3	0.733
Calves	JERxKØD_m	207	50	286	386	307	1.2	0.636
Calves	RDMxKØD_F	210	55	295	389	316	1.1	0.621
Calves	HOLxKØD_F	211	55	288	394	309	1.2	0.637
Calves	JERxKØD_F	181	40	297	348	318	1.0	0.541
Young animals	RDMxKØD_m	291	60	363	522	384	1.3	0.718
Young animals	HOLxKØD_m	295	60	369	532	390	1.3	0.718
Young animals	JERxKØD_m	256	50	387	472	408	1.1	0.596
Young animals	RDMxKØD_F	271	55	419	488	440	1.0	0.581
Young animals	HOLxKØD_F	262	55	406	477	427	1.0	0.577
Young animals	JERxKØD_F	218	40	418	411	439	0.9	0.474