

# Feed standards must be followed to achieve big piglets at birth – data collection from practice

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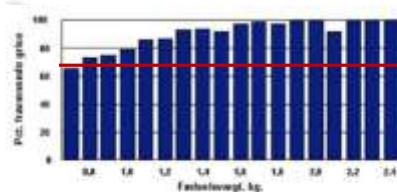
1

## Weight at birth

High weight at birth produces low mortality in the farrowing stable

SEGES Medd  
~15% weighs less than 1 kg

Of these app. 50% die



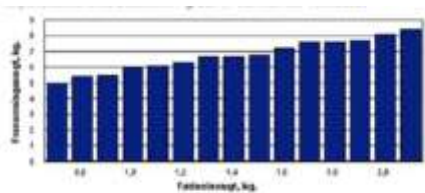
Figur 3. Fødselsvægtens betydning for partigrøns overlevelse [1] (figur: Fleming Thorup, bilde nr. 7229)



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## Weight at birth

High weight at birth produces higher weight at weaning

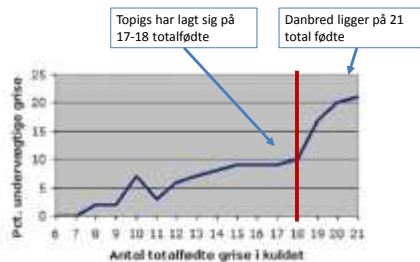


Figur 4. Fødselsvægtens betydning for færdsvægt [1] (figur: Fleming Thorup, bilde nr. 7230)

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## Weight at birth

10 % more total born --> 200% more weak born piglets

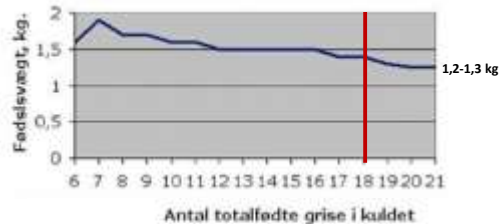


Figur 2. Procent gris under 1 kg ved fødsel ved almindelige kuld størrelser (figur: Fleming Thorup, bilde nr. 7228)

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## Weight at birth

The piglets must weigh at least 1,2-1,3 kg at birth with the litter sizes we have at the moment.  
Pig from a gilt's litter typically weigh 150-200 grams less per pig



Figur 3. Fødselsvægt ved almindelige kuld størrelser (figur: Fleming Thorup, bilde nr. 7227)

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## Standards for nutrients

Stof	Forældre	Porke	Laborsvin, porke og drægtige svin	Frøgtige svin og grise	Frøgtige svin	% af typen* ved typen** 3 pr. Pige 64,5 3,5-6
Colostrum liter	5	10				
Colostrum til alle 2 uger	5	10				
SPK, indhold i kg	320-350	30-110	80-110	90-100	7-10 100	
Fødselsvægt i liter	15	5	10	10		
Strøgsukker, en liter i kg		80-110	18-110	9-110	0-60	
Strøgsukker, 2 liter i kg						
Ammonium	50	50	50	50	50	
Normer for forfødegrøden og forfødegrøden, g pr. Pige						
Uden	7,5	6,0	6,0	6,0	6,0	100 100
Med colostrum	7,5	7,5	7,5	7,5	7,5	50 50
Med colostrum + mælk	7,5	7,5	7,5	7,5	7,5	50 50
Uden	8,0	8,0	8,0	8,0	8,0	45 45
Med colostrum	8,0	8,0	8,0	8,0	8,0	50 50
Med colostrum + mælk	8,0	8,0	8,0	8,0	8,0	50 50
Uden	8,5	8,5	8,5	8,5	8,5	100 100
Med colostrum	8,5	8,5	8,5	8,5	8,5	50 50
Med colostrum + mælk	8,5	8,5	8,5	8,5	8,5	50 50
Uden	9,0	9,0	9,0	9,0	9,0	100 100
Med colostrum	9,0	9,0	9,0	9,0	9,0	50 50
Med colostrum + mælk	9,0	9,0	9,0	9,0	9,0	50 50
Uden	9,5	9,5	9,5	9,5	9,5	100 100
Med colostrum	9,5	9,5	9,5	9,5	9,5	50 50
Med colostrum + mælk	9,5	9,5	9,5	9,5	9,5	50 50
Uden	10,0	10,0	10,0	10,0	10,0	100 100
Med colostrum	10,0	10,0	10,0	10,0	10,0	50 50
Med colostrum + mælk	10,0	10,0	10,0	10,0	10,0	50 50
Uden	10,5	10,5	10,5	10,5	10,5	100 100
Med colostrum	10,5	10,5	10,5	10,5	10,5	50 50
Med colostrum + mælk	10,5	10,5	10,5	10,5	10,5	50 50
Uden	11,0	11,0	11,0	11,0	11,0	100 100
Med colostrum	11,0	11,0	11,0	11,0	11,0	50 50
Med colostrum + mælk	11,0	11,0	11,0	11,0	11,0	50 50
Uden	11,5	11,5	11,5	11,5	11,5	100 100
Med colostrum	11,5	11,5	11,5	11,5	11,5	50 50
Med colostrum + mælk	11,5	11,5	11,5	11,5	11,5	50 50
Uden	12,0	12,0	12,0	12,0	12,0	100 100
Med colostrum	12,0	12,0	12,0	12,0	12,0	50 50
Med colostrum + mælk	12,0	12,0	12,0	12,0	12,0	50 50
Uden	12,5	12,5	12,5	12,5	12,5	100 100
Med colostrum	12,5	12,5	12,5	12,5	12,5	50 50
Med colostrum + mælk	12,5	12,5	12,5	12,5	12,5	50 50
Uden	13,0	13,0	13,0	13,0	13,0	100 100
Med colostrum	13,0	13,0	13,0	13,0	13,0	50 50
Med colostrum + mælk	13,0	13,0	13,0	13,0	13,0	50 50
Uden	13,5	13,5	13,5	13,5	13,5	100 100
Med colostrum	13,5	13,5	13,5	13,5	13,5	50 50
Med colostrum + mælk	13,5	13,5	13,5	13,5	13,5	50 50
Uden	14,0	14,0	14,0	14,0	14,0	100 100
Med colostrum	14,0	14,0	14,0	14,0	14,0	50 50
Med colostrum + mælk	14,0	14,0	14,0	14,0	14,0	50 50
Uden	14,5	14,5	14,5	14,5	14,5	100 100
Med colostrum	14,5	14,5	14,5	14,5	14,5	50 50
Med colostrum + mælk	14,5	14,5	14,5	14,5	14,5	50 50
Uden	15,0	15,0	15,0	15,0	15,0	100 100
Med colostrum	15,0	15,0	15,0	15,0	15,0	50 50
Med colostrum + mælk	15,0	15,0	15,0	15,0	15,0	50 50
Uden	15,5	15,5	15,5	15,5	15,5	100 100
Med colostrum	15,5	15,5	15,5	15,5	15,5	50 50
Med colostrum + mælk	15,5	15,5	15,5	15,5	15,5	50 50
Uden	16,0	16,0	16,0	16,0	16,0	100 100
Med colostrum	16,0	16,0	16,0	16,0	16,0	50 50
Med colostrum + mælk	16,0	16,0	16,0	16,0	16,0	50 50
Uden	16,5	16,5	16,5	16,5	16,5	100 100
Med colostrum	16,5	16,5	16,5	16,5	16,5	50 50
Med colostrum + mælk	16,5	16,5	16,5	16,5	16,5	50 50
Uden	17,0	17,0	17,0	17,0	17,0	100 100
Med colostrum	17,0	17,0	17,0	17,0	17,0	50 50
Med colostrum + mælk	17,0	17,0	17,0	17,0	17,0	50 50
Uden	17,5	17,5	17,5	17,5	17,5	100 100
Med colostrum	17,5	17,5	17,5	17,5	17,5	50 50
Med colostrum + mælk	17,5	17,5	17,5	17,5	17,5	50 50
Uden	18,0	18,0	18,0	18,0	18,0	100 100
Med colostrum	18,0	18,0	18,0	18,0	18,0	50 50
Med colostrum + mælk	18,0	18,0	18,0	18,0	18,0	50 50
Uden	18,5	18,5	18,5	18,5	18,5	100 100
Med colostrum	18,5	18,5	18,5	18,5	18,5	50 50
Med colostrum + mælk	18,5	18,5	18,5	18,5	18,5	50 50
Uden	19,0	19,0	19,0	19,0	19,0	100 100
Med colostrum	19,0	19,0	19,0	19,0	19,0	50 50
Med colostrum + mælk	19,0	19,0	19,0	19,0	19,0	50 50
Uden	19,5	19,5	19,5	19,5	19,5	100 100
Med colostrum	19,5	19,5	19,5	19,5	19,5	50 50
Med colostrum + mælk	19,5	19,5	19,5	19,5	19,5	50 50
Uden	20,0	20,0	20,0	20,0	20,0	100 100
Med colostrum	20,0	20,0	20,0	20,0	20,0	50 50
Med colostrum + mælk	20,0	20,0	20,0	20,0	20,0	50 50
Uden	20,5	20,5	20,5	20,5	20,5	100 100
Med colostrum	20,5	20,5	20,5	20,5	20,5	50 50
Med colostrum + mælk	20,5	20,5	20,5	20,5	20,5	50 50
Uden	21,0	21,0	21,0	21,0	21,0	100 100
Med colostrum	21,0	21,0	21,0	21,0	21,0	50 50
Med colostrum + mælk	21,0	21,0	21,0	21,0	21,0	50 50
Uden	21,5	21,5	21,5	21,5	21,5	100 100
Med colostrum	21,5	21,5	21,5	21,5	21,5	50 50
Med colostrum + mælk	21,5	21,5	21,5	21,5	21,5	50 50
Uden	22,0	22,0	22,0	22,0	22,0	100 100
Med colostrum	22,0	22,0	22,0	22,0	22,0	50 50
Med colostrum + mælk	22,0	22,0	22,0	22,0	22,0	50 50
Uden	22,5	22,5	22,5	22,5	22,5	100 100
Med colostrum	22,5	22,5	22,5	22,5	22,5	50 50
Med colostrum + mælk	22,5	22,5	22,5	22,5	22,5	50 50
Uden	23,0	23,0	23,0	23,0	23,0	100 100
Med colostrum	23,0	23,0	23,0	23,0	23,0	50 50
Med colostrum + mælk	23,0	23,0	23,0	23,0	23,0	50 50
Uden	23,5	23,5	23,5	23,5	23,5	100 100
Med colostrum	23,5	23,5	23,5	23,5	23,5	50 50
Med colostrum + mælk	23,5	23,5	23,5	23,5	23,5	50 50
Uden	24,0	24,0	24,0	24,0	24,0	100 100
Med colostrum	24,0	24,0	24,0	24,0	24,0	50 50
Med colostrum + mælk	24,0	24,0	24,0	24,0	24,0	50 50

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## Feeding curve for pregnant sows SEGES

Vedligeholdelsesfoderkurver drægtige søer:

Drægtighedsdag	Føde	Middel	Mager	Gylte
	I gyltperioden fodres alle med 4,5 FE			
	= 10 mm	13-16 mm	=13 mm	
Rygtpøkketykkelse ved freventning				
0	2,5	3,0	4,5	2,2-2,4*
26	2,5	3,0	4,5	2,2-2,4*
31	***2,3	***2,3	3,5	2,5-2,7**
77	***2,3	***2,3	3,5	2,5-2,7**
84	2,3	2,5	3,5	2,3
112	3,5	3,5	3,5	3,3
114	3,5	3,5	3,5	3,3
115	3,5	3,5	3,5	3,0-3,5
Føring	3,5	3,5	3,5	3,0-3,5

\* Det anbefales, at gylte fodres moderat i de første fire uger efter lægning, da markant fodertilvækst ad over vedligeholdelsesniveauet øger risikoen for foetaltilstand under implantationen. Det optimale ville være at kunne fodre de små gylte med 2,2 FE30 pr. dag og store gylte 2,4 FE30 pr. dag.

\*\* Fødring efter hud for at opnå den ønskede vægt af gylten ved føring.

\*\*\* Vedligeholdelsesføde:

- No effect in litter weight >3,5 Fe/day the last 3-4 weeks before farrowing!! If there are no faults.
- Gilts cannot be fed too hard 4 weeks insemination -> loss of foetuses

## Remember to increase feed strenght if it's cold in the gestation section

Room temperature has a high impact on the sow's need for feed. Also, skinny sows have less backfat and therefore a higher need for food for keeping warm.  
Extra feed at lower temperature. Feed unit pr sow/day:

Temperaturen har stor indflydelse på søens foderbehov. Deutselen har mindre fedt og derfor et større behov for foder til varmeproduktion.

Ekstra foder ved følgende temperatur F°C/dag:

Stoktemperatur C°	20	18	16	5
Føde søer, FE30	0	0,16	0,36	0,71
Magne søer, FE30	0	0,26	0,56	0,85



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## Everybody has an opinion on sow feeding and nutrients in the feed

- If it goes well for the neighbour are his feedings automatically better?
  - Things are always working for the neighbour ;-)
- If you have a feeling that the weight at birth is increased by using gestation feed with more protein, does this mean that SEGES's standards are wrong?



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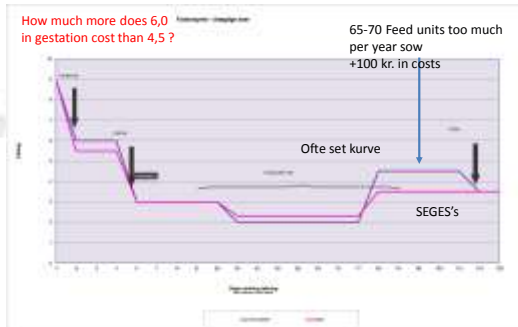
## Gestation feed with 6.0 in lysin and 100 g. digestible raw protein?

	Best No.	Best Name	Best Type	Best No.	Best Name	Best Type	Best No.	Best Name	Best Type
Protein	6	6	6	6	6	6	6	6	6
... (many rows) ...									
Protein	6	6	6	6	6	6	6	6	6
... (many rows) ...									
Protein	6	6	6	6	6	6	6	6	6
... (many rows) ...									



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## Very high level of protein and very high feed strength at the end of gestation



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## High level of protein and low feed strength during maintenance strengthens weight loss!!

### Guide til fase 1 i Dukan kuren (minus 3 kilo på 5 dage)



Guide to phase 1 in the Dukan diet (minus 3 kilos in 5 days)

Alt hvad du behøver at vide om fase 1 (angrebefølsen) i Dukan kuren.



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### What can go wrong in the stable?

- Defects in the grinding/mixing system
- Fermentation in wet feed pipes (if not enough raw protein)
- Poor allocation of feed in gestation section.
  - Floor feeding
- Wrong setting of feed dispensers / Transponders / weighing of density
- Lame sows typically don't digest enough feed



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### Why not invest time in weighing some litters at birth?

Whole litters were weighed in a herd, who complained about weak born piglets/litters.

No doubt that the feeding in this herd must be looked at!

FA	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100															
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200



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### Defects in grinding/mixing systems. Not enough minerals were added to the feed

- Many litters with an average weight less than 1 kilo
- Mortality increased to almost 20%
- Piglet diarrhoea in many litters



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6.0 digestable lysin and 100 g. digestable raw protein ->  
 5.0 digestable lysin and 95 g. digestable raw protein.  
 Maintenance increased from 1,8-2,0 -> 2,3FE

In 26% of the litters the average weight was less than 1 kg.



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3 months after the changes we found no litters with less than 1 kilo in average

0% of the litters had an average weight less than 1 kg.

Mortality decreased from 16,9% to 11,8 %



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### Recap

- If Sege's standards and feeding curves are followed the birth weight is at the expected 1,2-1,3 kg
  - As long as there's no mistake in the mixing of feed
  - As long as there's no mistake in the amounts, which are being fed
  - 20% of the piglets less than 1 kg -> 10% dead
- It can make sense to increase level of digestable protein and Lysin in home-mixed feed to prevent variation in the feed.
- To weigh the pigs at birth is an easy way to control if feeding and housing is correct.



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Never give up!!!!



**PORCUS**  
SVINFFAGDVÆRGER