

# Balancing feed for optimal weaning and growth

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# Agenda

- Introduction
- Background: The dilemma
- What do we do?



# Mineral and premix - Production units 2013

**Denmark:**

Dansk Vilomix A/S, Lime fabrik  
Dansk Vilomix A/S, Sjølund fabrik

**Sweden:**

Kvarnbyfoder AB, Staffanstorp

**Norway:**

Normin AS, Hønefoss

**Finland:**

Hiven OY, Paimio (Hankkija-Maatalous OY)

**Latvia:**

SIA Baltic Feed, Tukums (Hankkija-Maatalous OY)

**Russia:**

Vitargos Rossovit, Efremov, Rusland

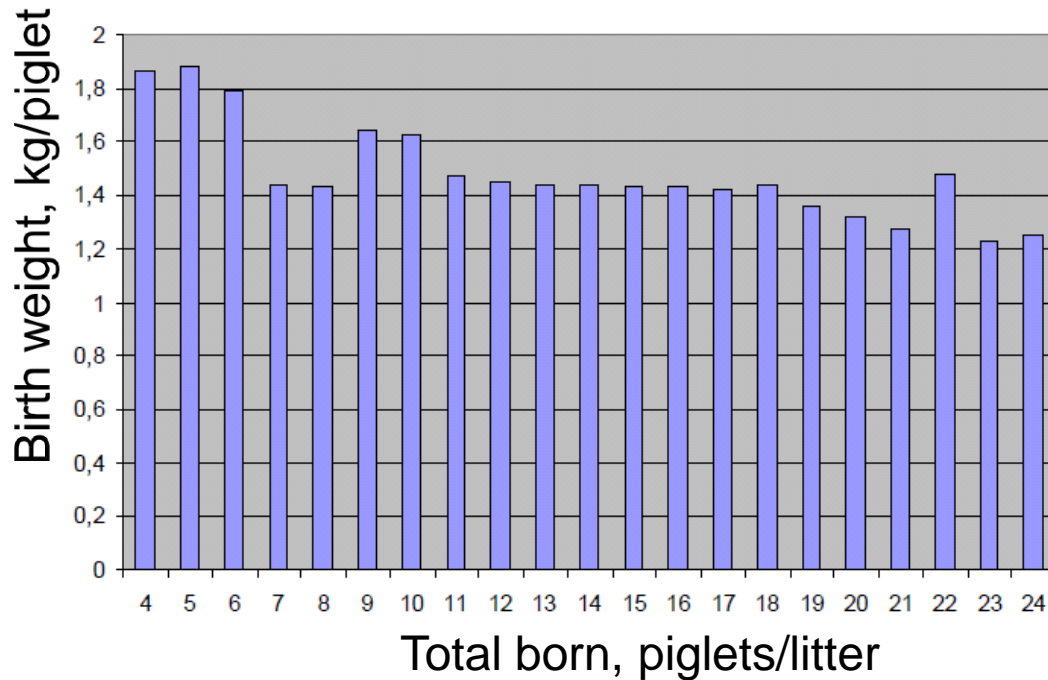


# Many piglets = lower weaning weight

	Q2 2012	Q1 2012	Q4 2011	Q3 2011	Q2 12 - Q3 11
No. Sows	823	826	822	827	824
Feed, Kg/sows	1532	1523	1568	1507	1533
<b>Weaned/sows/year</b>	<b>37,5</b>	<b>37,3</b>	<b>36,5</b>	<b>37,3</b>	<b>37,1</b>
Litter/sows/year	2,43	2,42	2,42	2,44	2,43
No. 1. litter, %	24	22	24	23	23
Life born/litter	16,5	16,7	16,5	16,4	16,5
Still born/litter	1,3	1,4	1,3	1,3	1,3
Weaned/litter	15,4	15,4	15,1	15,3	15,3
Suckling period, days	27	27	27	27	27
Dead suckling piglets, %	6,4	8,0	8,2	6,7	7,4
<b>Weight at weaning, kg</b>	<b>6,5</b>	<b>6,8</b>	<b>6,8</b>	<b>6,4</b>	<b>6,7</b>
Farrowing, %	95,0	94,3	95,6	94,9	95,0
Dead of culled sows, %	4,4	10,7	8,1	8,9	8,1

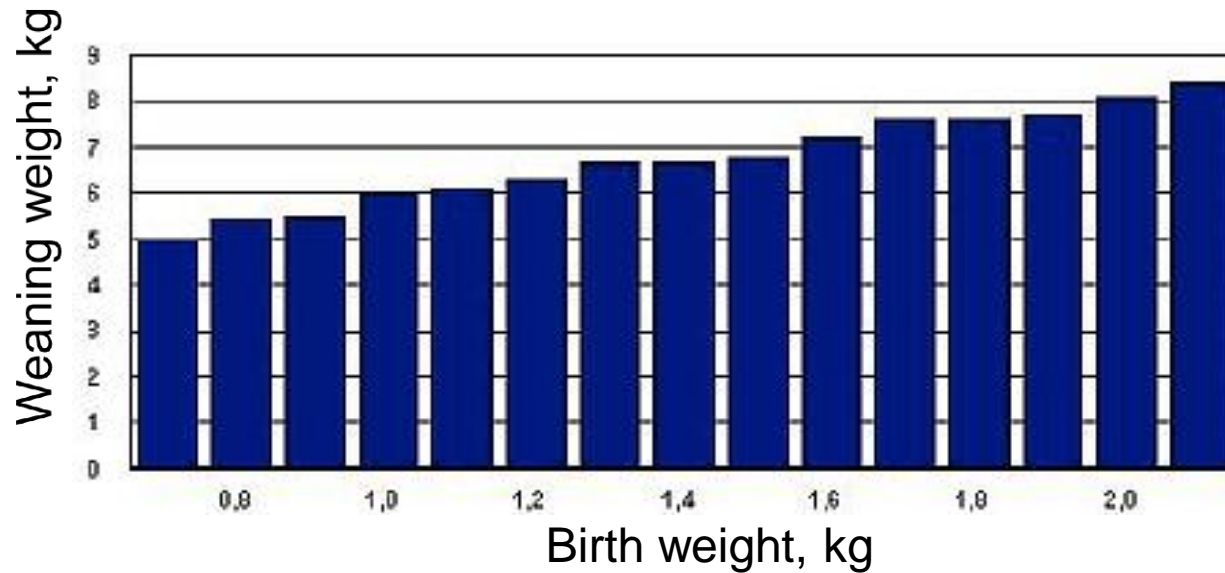
# The dilemma

## Effect of litter size on birth weight – 6.000 piglets



# The dilemma

## Weaning weight affected by birth weight



Thorup, 2010

# The dilemma

- Weaning weight was significant ( $p < 0,0001$ ) 600 gram lower per piglet, when 13 piglets pre litter was weaned compared to 11 piglets per litter. (Thorup, 2002).
- Bottom line:
  - Many piglets born 😊
  - Smaller piglets born 😞
  - Higher survival rate before weaning 😊 Thanks to Danavl breeding program!
  - Lower weight at weaning – the challenge

# Weaning is still difficult

- Small piglets
- Low feed uptake/feed refusal
- Focus on low usage of antibiotics from consumers and politicians
- Climate and housing
- Quality of the management





## The ban of AGP's started a lot of work in Denmark! Trials from 1990 - 2005

	Aromas	Acids, acid mix	NSP enzym	Micro organisms	Oligo saccharides (MOS, FOS)	Fibers, ammonia binders	Total
	Pigl.	Pigl.	Pigl.	Pigl.	Pigl.	Pigl.	
No. of trials	26	55	9	17	7	11	<b>125</b>
ADG, %	2,2	5,2	2,1	1,9	2,3	4,2	3,0
Feed conv. Improv., %	1,1	1,2	0,1	1,9	1,2	0,8	1,1
Significant trials#	2	19	0	0	0	1	<b>22</b>

# Measured as production value. Return of investment...

Modified from: Pig Research Centre, Danish Agriculture and Food Council, Maribo et al 2008

There are now easy solutions....

## What do we do – what is our main focus?

- High knowledge about the actual farm and their piglets!
- Right balance between energy and protein and amino acids
- Information and knowledge about the ingredients!

# High knowledge about the actual farm and their piglets

- See the piglets your self – Is 7 kg = 7 kg?
- Management: water, climate, feeding strategy, etc.
- Piglet feed can't be made in a feed optimization/formulation program only!



## Right balance between energy and protein and amino acids

- No over - no under estimation...
- High energy – balanced protein content
- Wide range of quality protein sources:
  - Milk protein, soy protein concentrates, fish meal, potato protein, other hydrolyzed protein sources
- Optimizing on all essential amino acids
  - Addition of crystalline lys, meth, treo, trypt, val

# Information and knowledge about the ingredients

- Energy and digestibility evaluation of the ingredients
- Content of nutrients: protein, fat, amino acids, macro minerals...
- Content of ANF's: trypsin inhibitors, fibers, solanin, toxins....
- Stability and variation

