

Zinkfri fodring: Hvordan?

The challenge, solutions & practice from the Benelux and Italy !!

Leendert Amersfoort

Roberto Bardini



Me

- Leendert Amersfoort
- 55 years young
- Nutritionist / Pig specialist
- Area > Netherlands / East Germany / Scandinavia

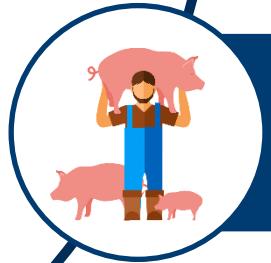




THE CHALLENGE



SOLUTIONS



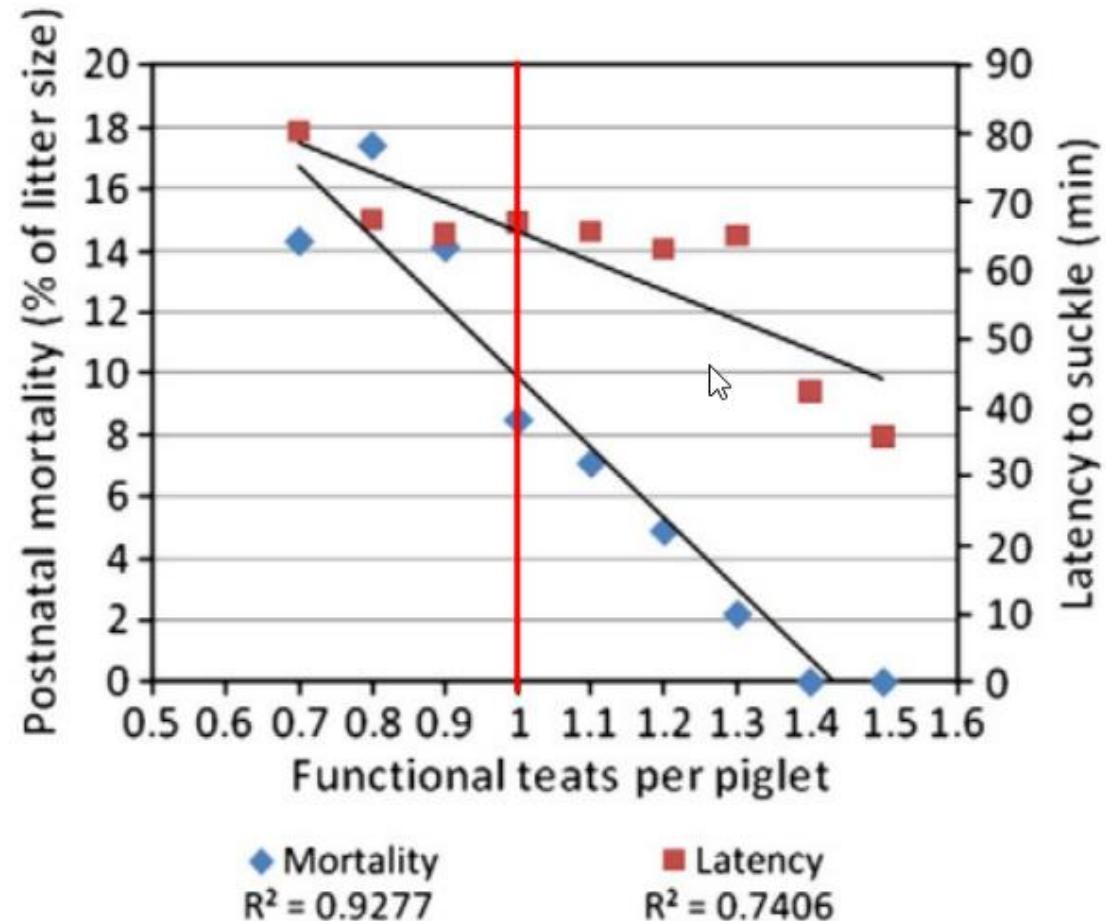
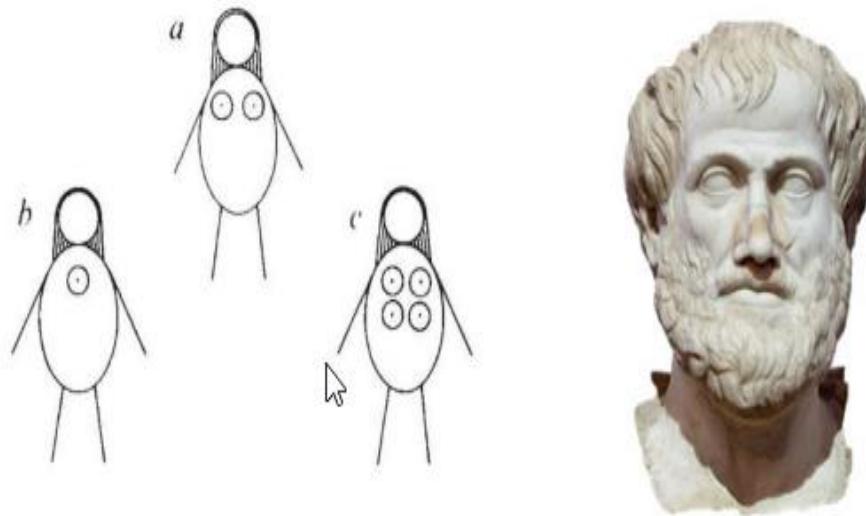
THE PRACTICE NL/IT

Fokus, fokus, fokus

- Colostrum supply
- Animal mixing
- Water supply
- Solid feed intake before weaning
- Safe diets round weaning



Sammenhæng mellem antal patter og antal grise

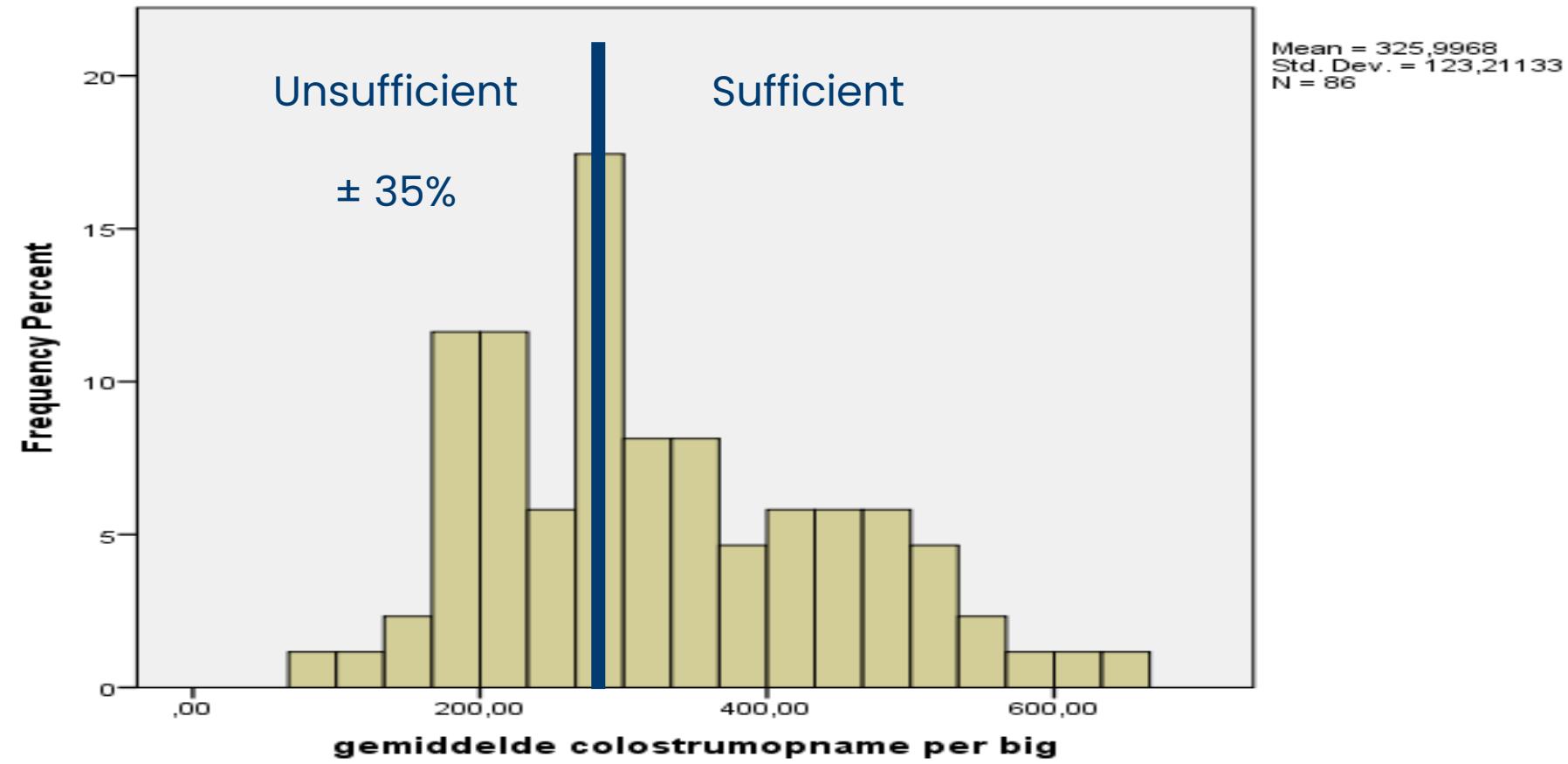


Råmælk er helt afgørende



COLOSTRUM
much
often
quickly

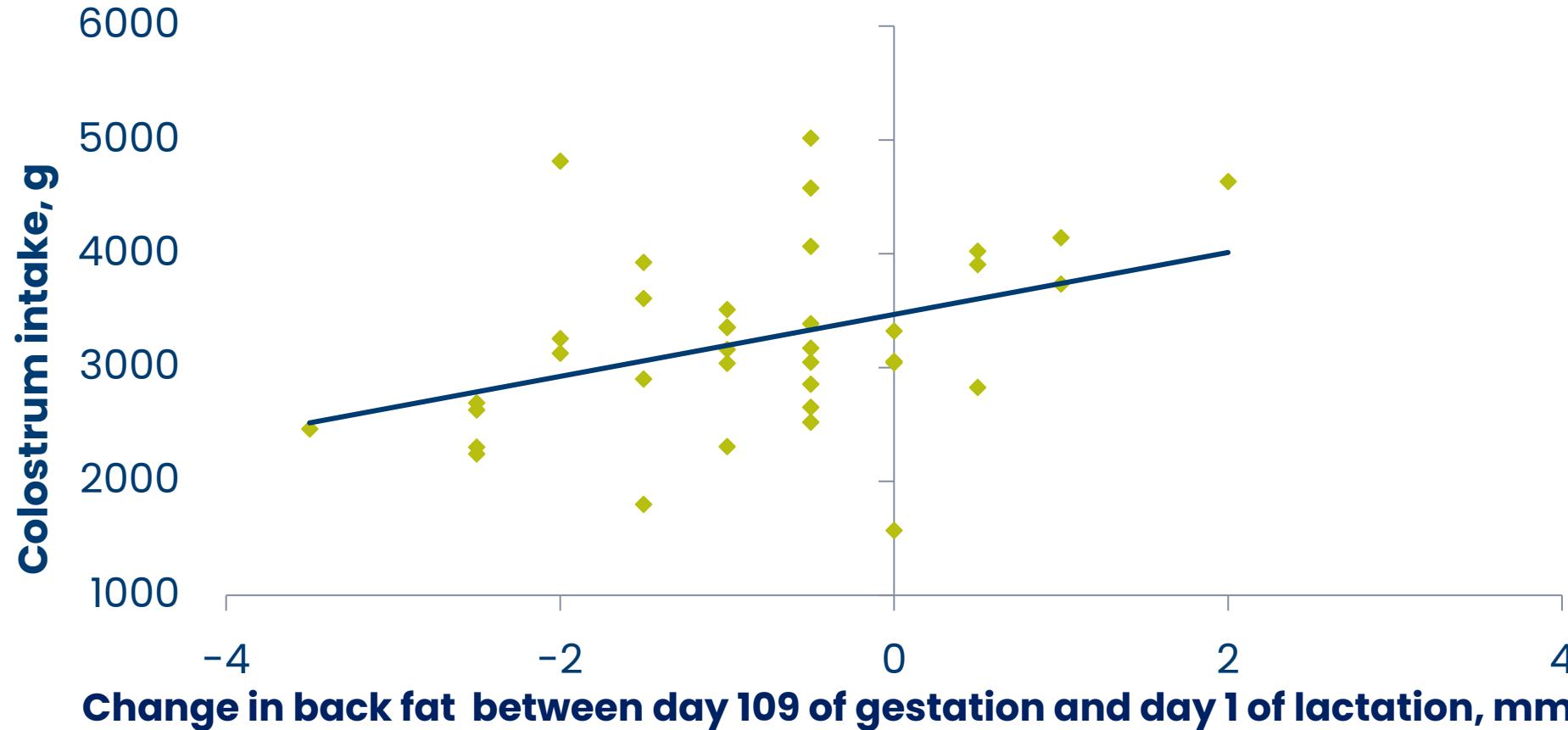
Råmælk er helt afgørende



35% of the sows has to low colostrum production !

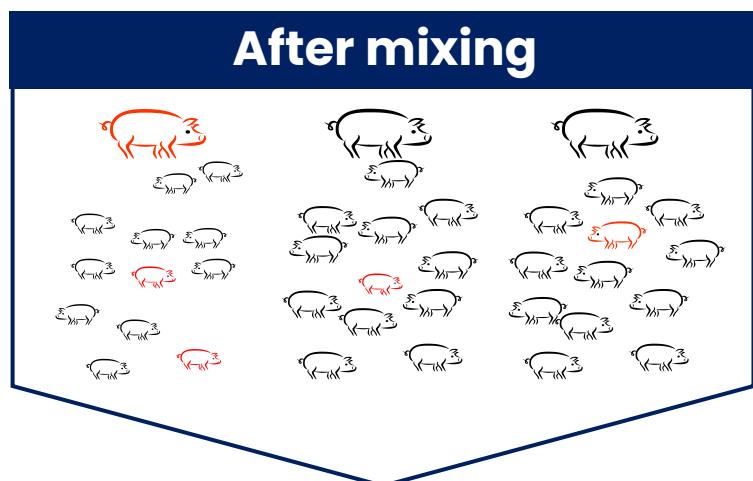
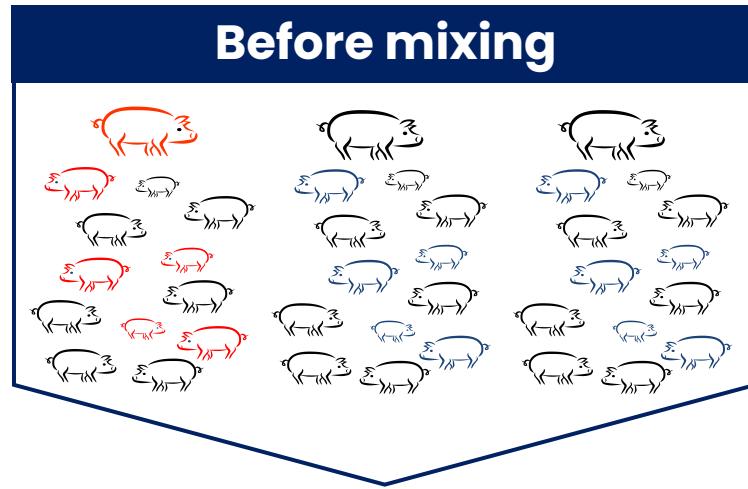
30 % of the piglets with colostrum intake below 200 gram will die !

Mangel på råmælk?

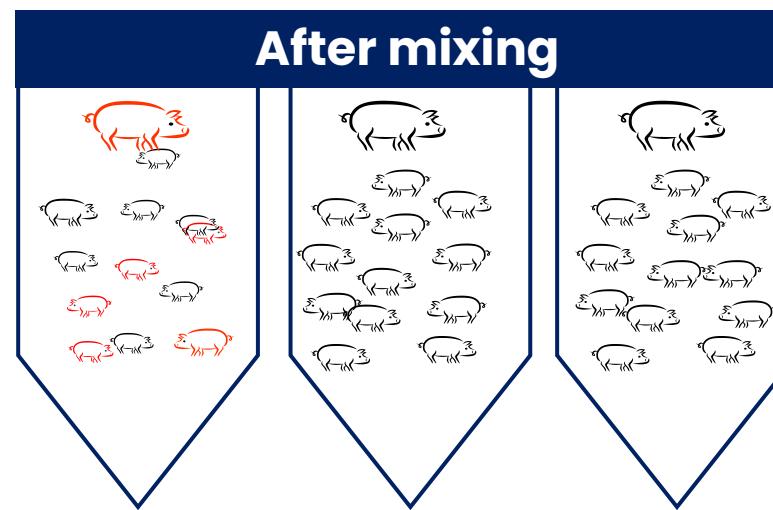
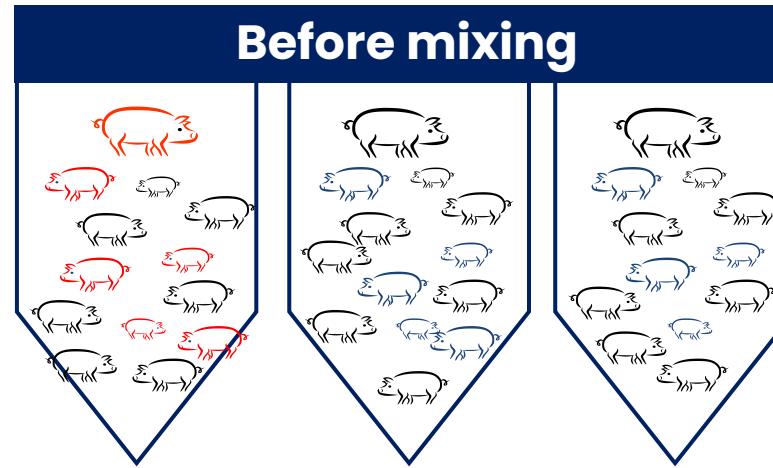


Ruben Decaluwe, Trouw Nutrition, 2014

Mindre sammenblanding = sundere grise

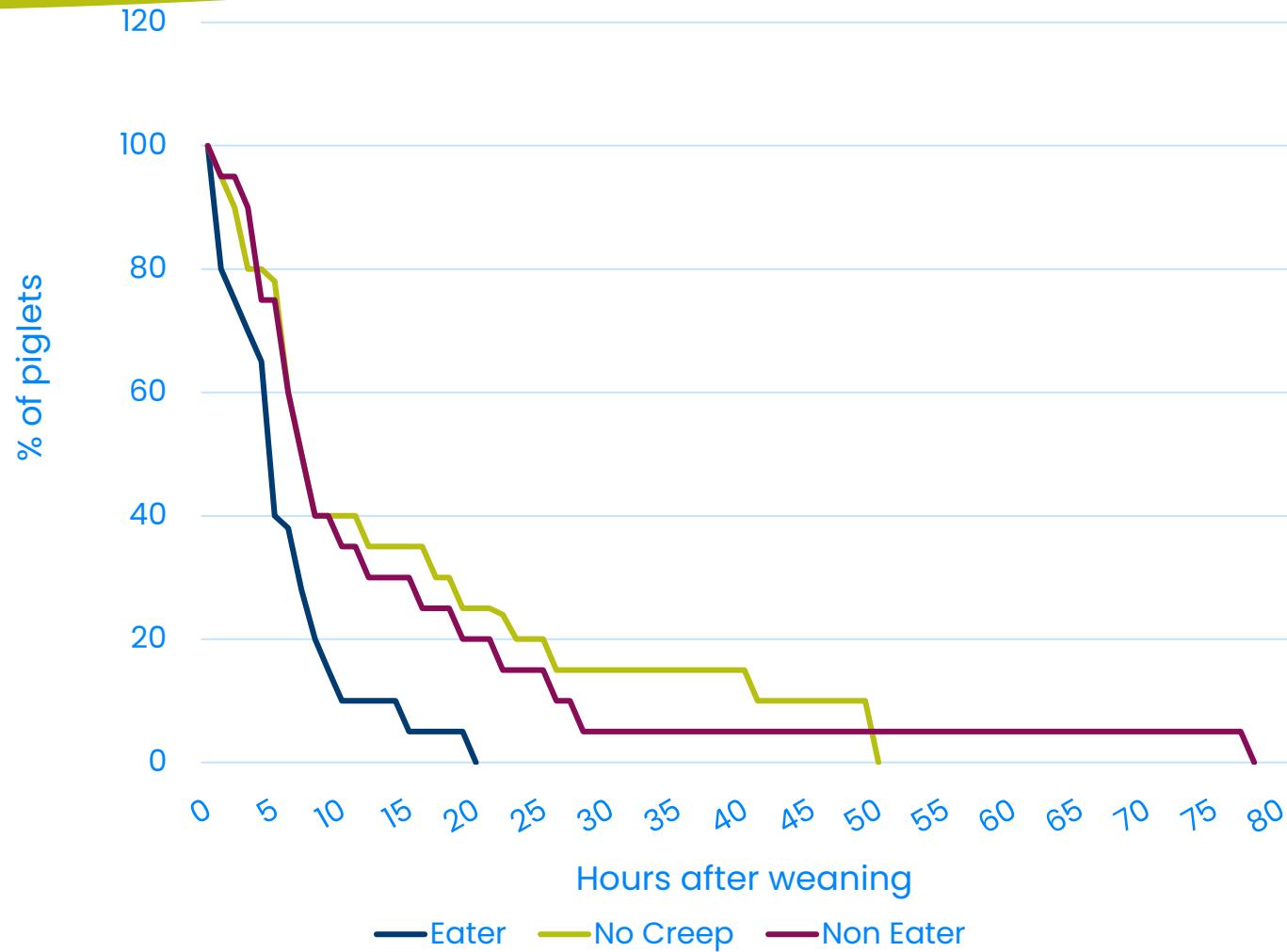


**95 % infected
animals**



**20 % infected
animals**

Feed intake before weaning boosts



Bruininx et al., 2002; Sulabo et al., 2008

Better feed intake before weaning = better gut health

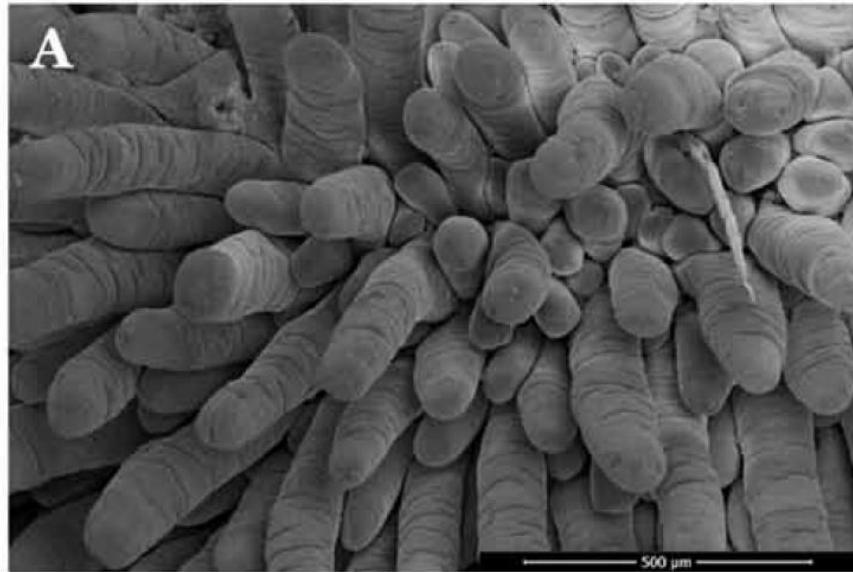
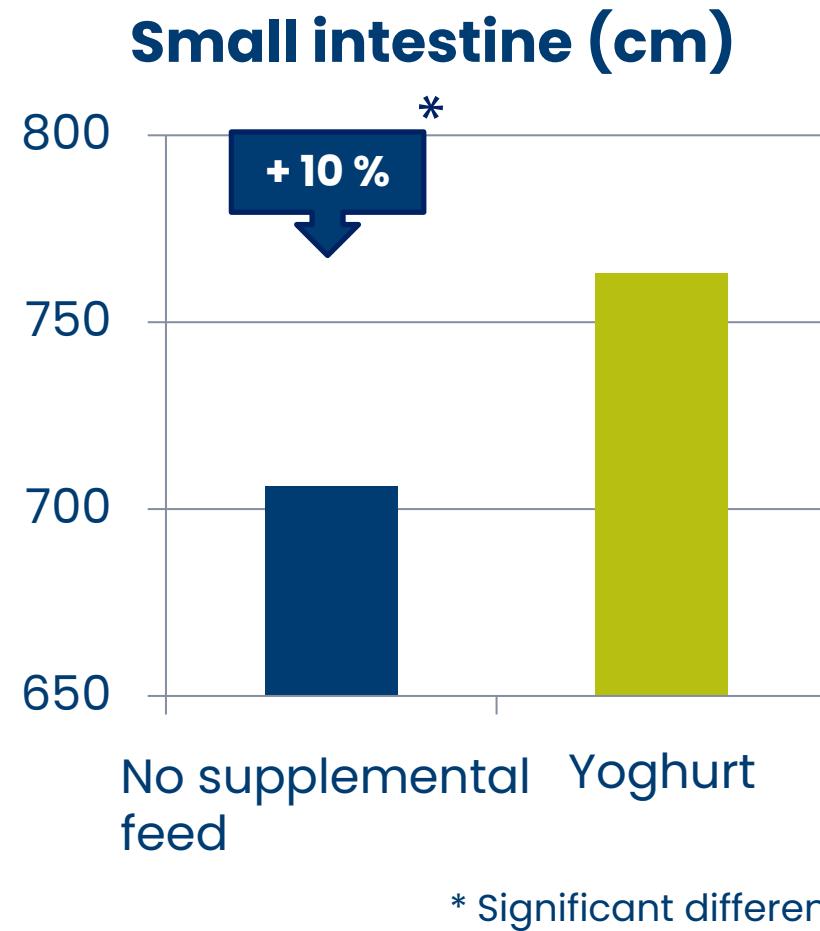


Figure 1. Intestinal integrity determined using scanning electron microscopy of a nutrient-dense complex milk replacer (NDM)-treated piglet. Scanning electron microscopy pictures of intestinal villi from the jejunum of an NDM-treated piglet (panel A) and a control piglet (panel B) are shown at 200x magnification, 2 kV, and 3.1 pA.

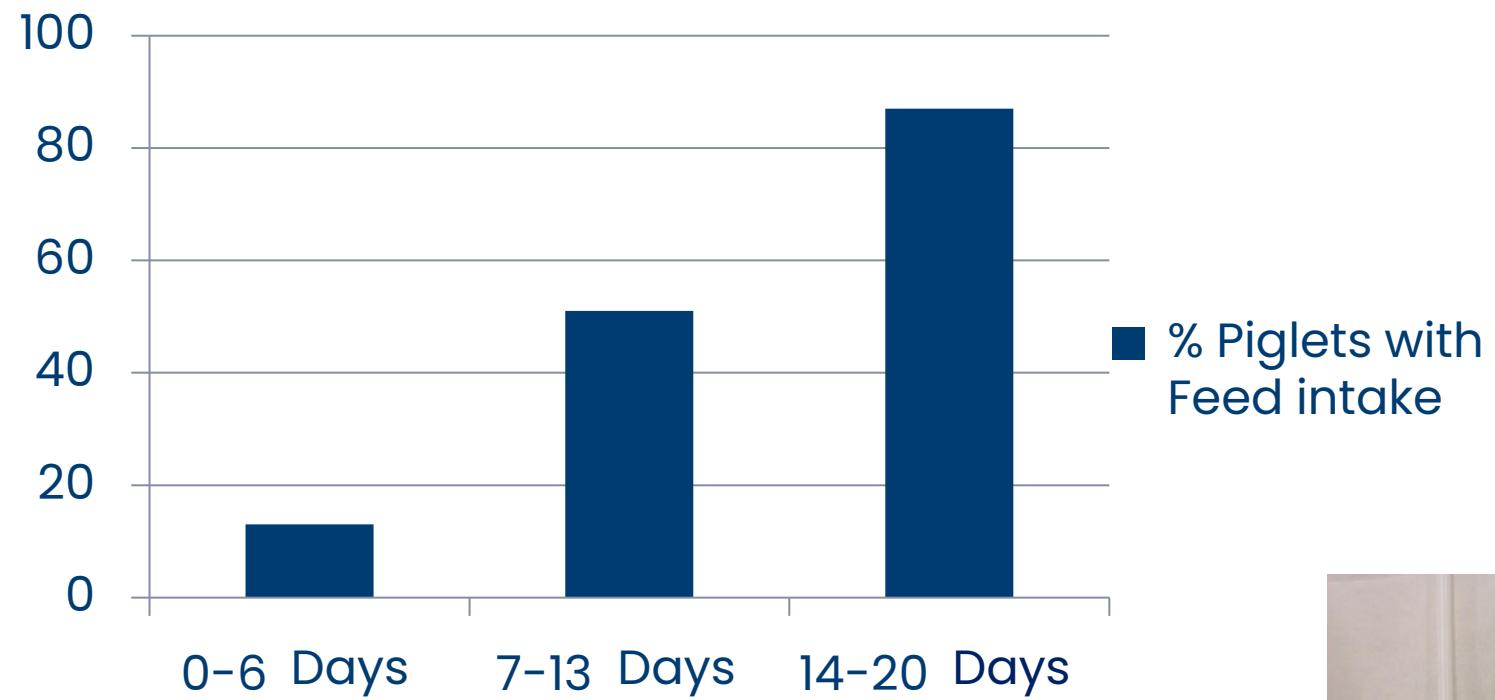
- Natural gut development = increased absorption = more nutrients for the piglet

2015 – Yoghurt trial – Wageningen UR

(Opblødt) foder (Yoghurt) før fravænning udvikler tyndtarm



Eating behaviour (85% optager travænningsfoder i uge 3)

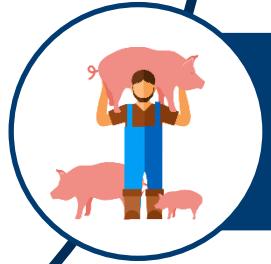




THE CHALLENGE



SOLUTIONS



THE PRACTICE NL/IT

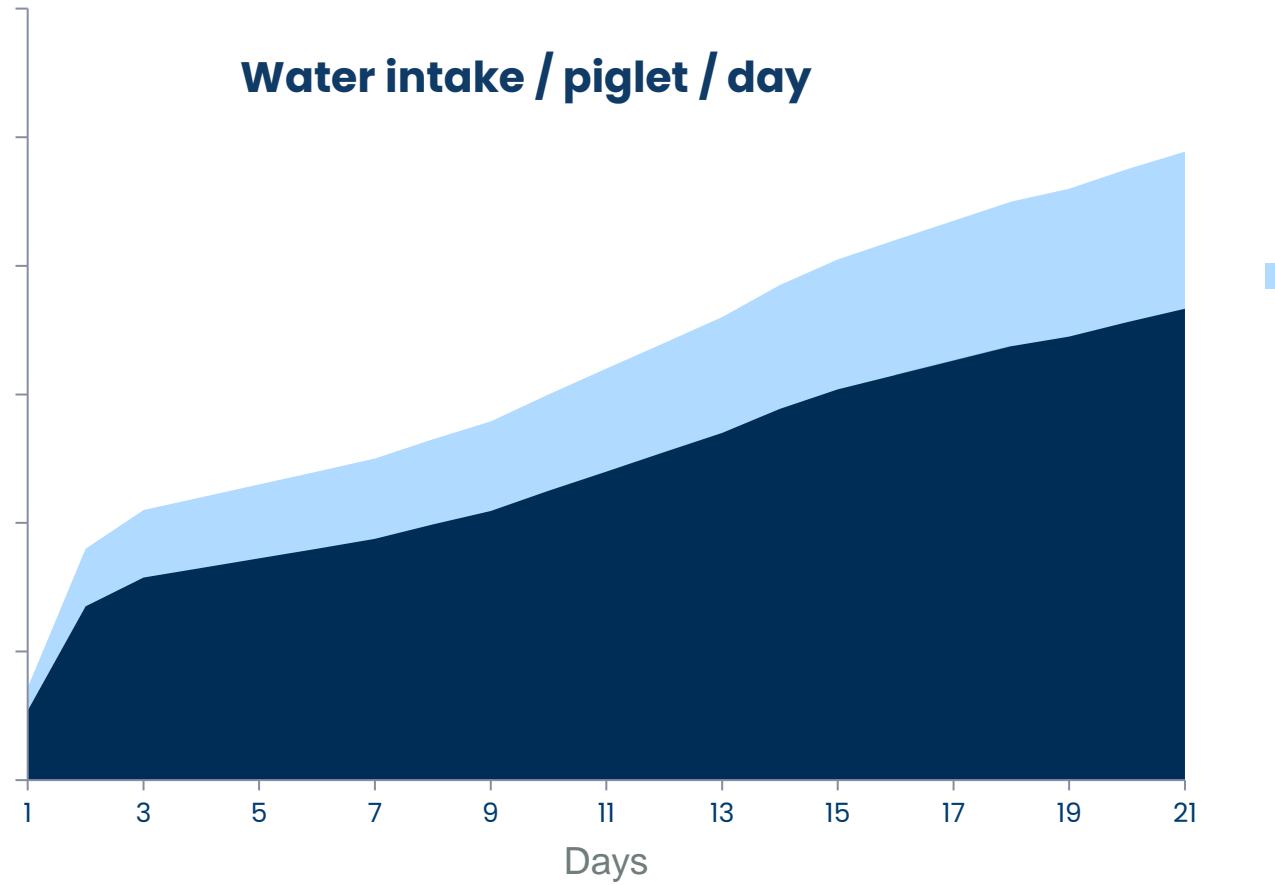
Løsning:



VAND: Tilgængelighed og kvalitet



Tilsætning af syre øger optagelse af vand / Selko pHe on water intake



Selko pH E

Control

34% increase
(P<0.007)

How does Selko pH works?



Step 1: Water

Synergistic free acid blend

Lowering/stabilizing pH

Of the water > increase palatability (smag)



Step 2: Stomach

Synergistic free acid blend

Lowering/stabilizing pH

Increasing digestion in the stomach

Step 3: Small intestine

Buffered organic acids

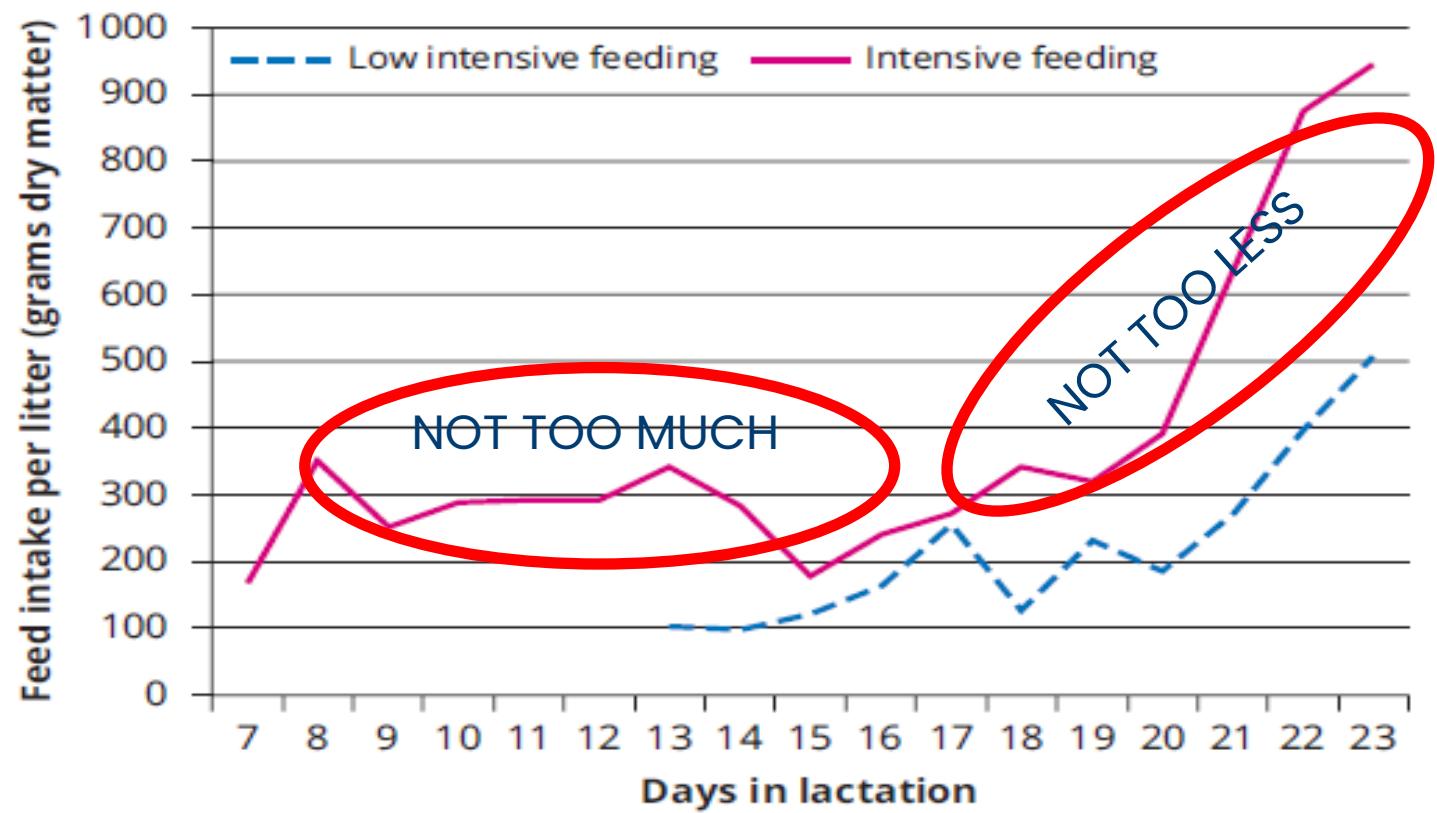
Microbial balans

Stimulate lactobacillus growth



For lidt og for meget: Foderoptagelsen stor fra uge 3

Figure 3 - Comparing a low intensive with an intensive practice of supplemental feeding on feed intake of litters.



Source: Trouw Nutrition R&D, 2015.

Lidt men tit –Teknik og knofedt!!



milkiwean
TOTAL PIGLET PERFORMANCE

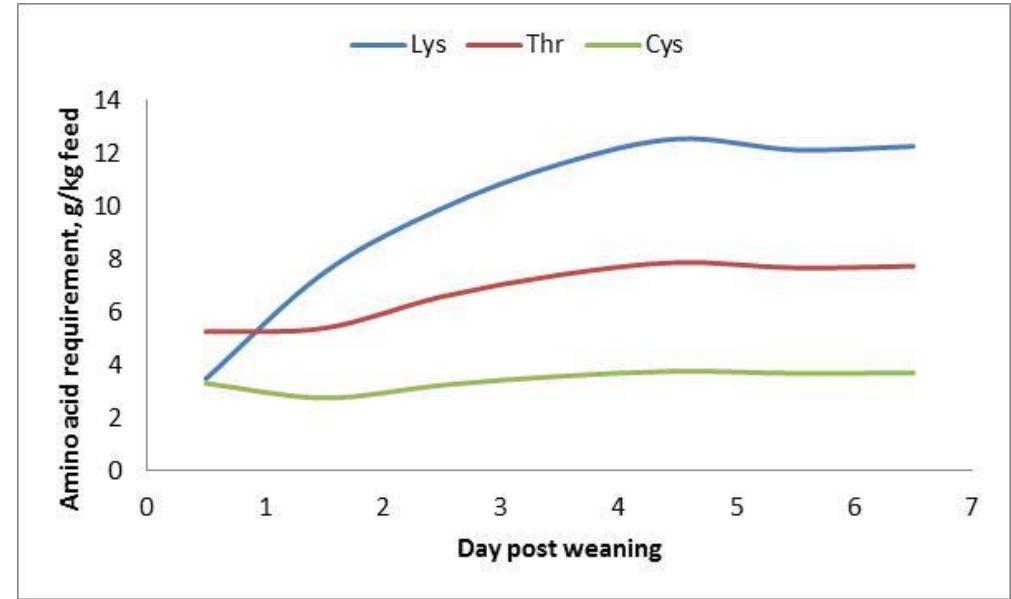
REGISTRATION CARD DRY FEED SUPPLY SUCKLING PIGLETS

DEPARTMENT >>

LACTATION	Day	CUP TYPE
WEEK 1	1	NO FEED
	2	
	3	
	4	
	5	
	6	
WEEK 2	7	START FEEDING 2 x PER DAY (EVENTUALLY HALF CUP 1 = 2 x 30 gram) RESTRICTED > ALL PENS THE SAME AMOUNT
	8	
	9	
	10	
	11	
	12	
	13	
WEEK 3	14	IF 80 % OF SCALES IS EMPTY FOR NEXT FEEDING > SWITCH TO NEXT CUP
	15	
	16	
	17	
	18	
	19	
WEEK 4	20	AD LIBITUM >> KEEP SCALES FULL WITH FEED
	21	
	22	
	23	
	24	
	25	
26	CUP SYSTEM	CUP 1 60 gram
27		CUP 2 120 gram
28	CUP 3 250 gram	

Safe diets round weaning

- Fibre
 - Fast fermentable Fibre
 - Slow fermentable Fibre
 - **Resistant Fibre**
- Protein
 - Amino acid profile differs the first week after weaning
 - **Fast digestible Protein sources !!**
 - Fine grinded



A combination of resistant fibre and fast protein is important

Safe diets round weaning

- **High Energy**
- **Lower Crude Protein (16,0 %)**
- **Tasty (for the smaller piglets)**
- **Resistant Fibre & fast Protein**
- **Cleaned cereals**
- **(Fatty) acids**
- **Coconut oil**
- **Specific feed additives**



NutriKonc 30 Care Power (600295-0)

- ✓ NutriKonc 30 Care Power iblandes med 30 %, 2,5 % fedt, 20 % Byg, 38,1 % hvede og 9,4 Sojaproteinkoncentrat
- ✓ Anvendes primært i besætninger, hvor der fravænnes mange smågrise
- ✓ Anvendes i besætninger, hvor udfasning af zink er en udfordring
- ✓ Indeholder blodplasma, som styrker immunforsvaret og samtidig øger tilvæksten
- ✓ Alt tilsat korn i koncentratet er varmebehandlet for at øge fordøjeligheden af stivelse
- ✓ Protein kommer bl.a. fra plasma, fiskemel, kartoffelprotein- og sojaproteinkoncentrat
- ✓ Tilsat en kombination af Calciumformiat, Benzoesyre og Nutri Novo (syre)
- ✓ Formuleret efter OVN Koncept (Optimal Vitamin Nutrition)
- ✓ Tilsat probiotikum

Blandingsvejledning	
Råvare	%
NutriKonc 30 Care Power	30,0
HP270 Sojaproteinkonc.	9,4
Fedt	2,5
Byg	20,0
Hvede	38,1

Vejledende sammensætning af færdigfoder	
Råvare	%
Mælkepulver	5,6
Blodplasma	1,2
Fiskemel	1,5
Sojaproteinkoncentrat	9,4
Kartoffelproteinkoncentrat	1,0
Varmebehandlet korn	11,5
Fibre	3,0
Calciumformiat	0,6
Nutri Novo	0,5
Benzoesyre	0,2

Næringsstofsammensætning i færdigfoder	
FEsv	117,0
St. ford. råprotein, g/FE	120,0
St. ford. lysin, g/FE	10,0
St. ford. methionin, g/FE	5,0
St. ford. treonin, g/FE	7,0
St. ford. tryptofan, g/FE	2,1
St. ford. valin, g/FE	6,8
Calcium, g/FE	6,0
Ford. fosfor, g/FE	3,3
Natrium, g/FE	2,5
A-vitamin (1000 i.e)/FE	12,5
Hyo-D (D-vit) (1000 i.e)/FE	1,7
E-vitamin (alfatok.)/FE	125,0
E-vitamin RRR naturlig/FE	42,3
K-vitamin, mg/FE	9,0
C-vitamin, mg/FE	170
Biotin, mg/FE	0,5
Probiotikum	Ja



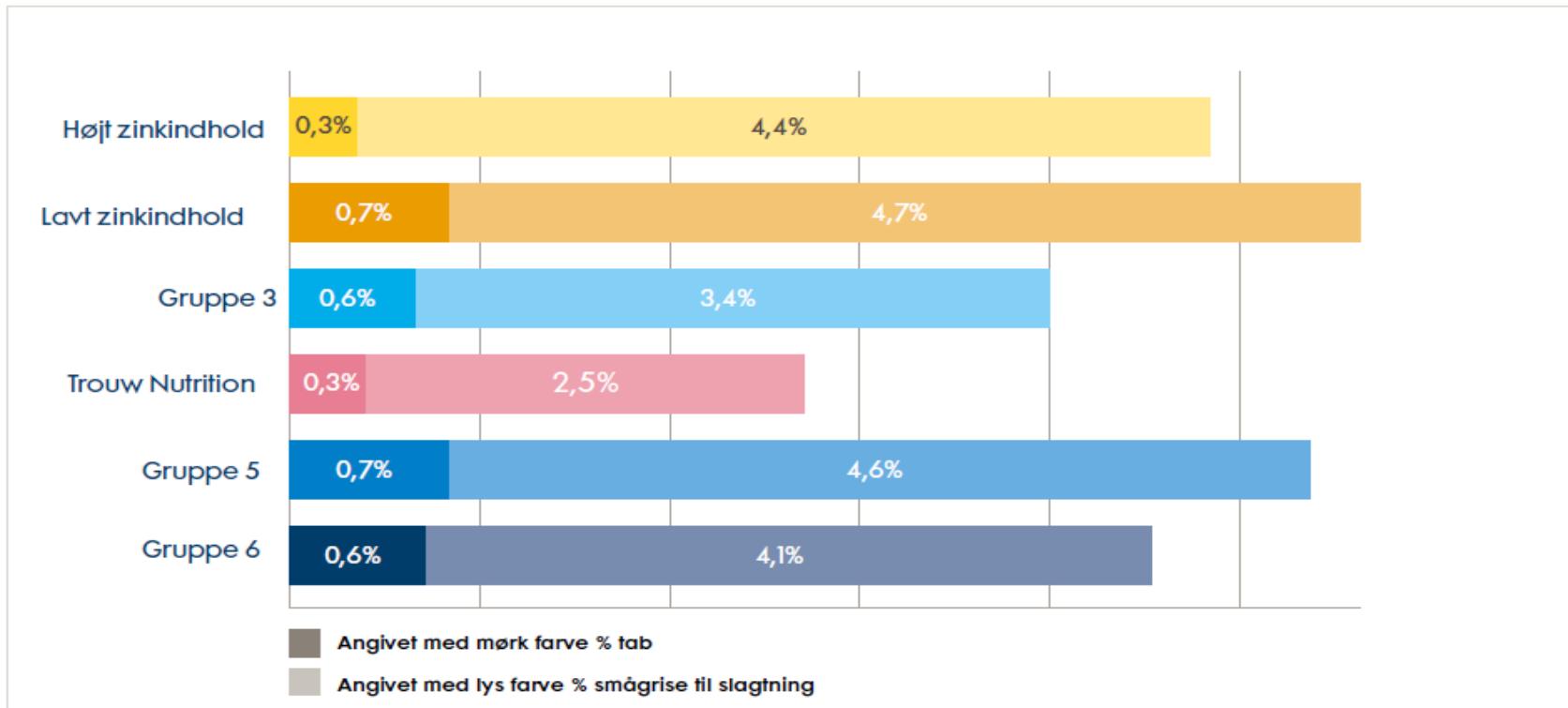
+45 87 50 08 80
info@nutrimin.dk

Bodalen 11, DK - 8643 Ans By
www.nutrimin.dk



The result:

Figur 1: Mindste tab i løbet af avisperiode



Dødelighedsprocent i fravaenningsperioden (Kilde: Seges, undersøgelsesrapport nr.1147)

> Trouw Nutrition concept 97,2 % vital piglets = + 1,6 %

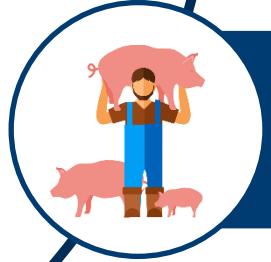
Seges Trial 1147 - 2018



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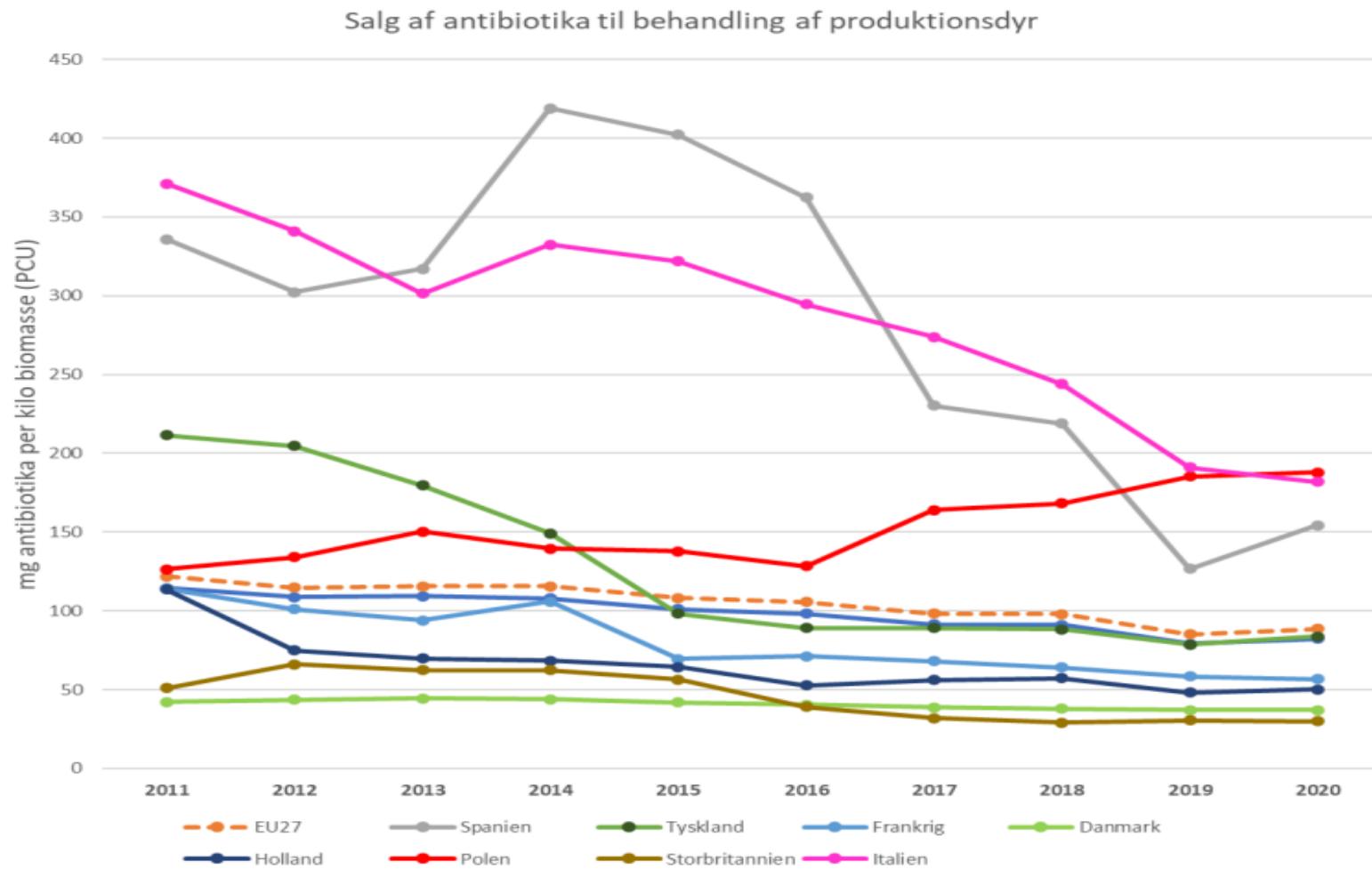


THE PRACTICE NL/IT

Technical results 2021

	Average NL	Average DK	NL 20 % best	DK 25% best
Average sows/farm	530	694	660	794
Weaned/pig/sow/y	31,1	34,0	34,4	35,6
% Replacement sows	43	?	42	?
Farrowing rate	86	87,8	90	90,6
Weaning period	28	31	26,3	30
Life born piglets	15,3	17,9	16,2	18,6
Dead born piglets	1,2	2	1,3	1,9
Mortality before weaning	12,3	15,3	11,0	12,7
Weaned piglet	13,3	15,2	14,3	16,2
Mortality after weaning	2,5	3,5	2,8	2,9
Kg sowfeed / sow / year	1267	1428	1279	1425

Situation Netherlands (defined /daily dose/ animal) • Zinc free since 2018



Figur 2. Salg af antibiotika til behandling af produktionsdyr i 2011-2020 i udvalgte europæiske lande

Fokus i Benelux-landene (Trouw) siden 2013

- It's a **team** approach !!
- Internal & external **Bio security**
- Strong focus on farrowing process > **vital born** piglets
- **Split suckling** > less mixing of piglets
- More focus on **by feeding** under the sow
- Acid products on drinking **water** round weaning > Check water fressness !!
- **Special diets** the last week before weaning to the first week after weaning
- Developed feed based on **eating behaviour** of the genetic type
- More problems with **streptococci**

