The effect of different dietary energy levels during rearing and mid-gestation on gilt performance

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Photo: Jens Haugen

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Nortura

Felleskjøpet

norsvin

Background

Photo: Jens Haugen

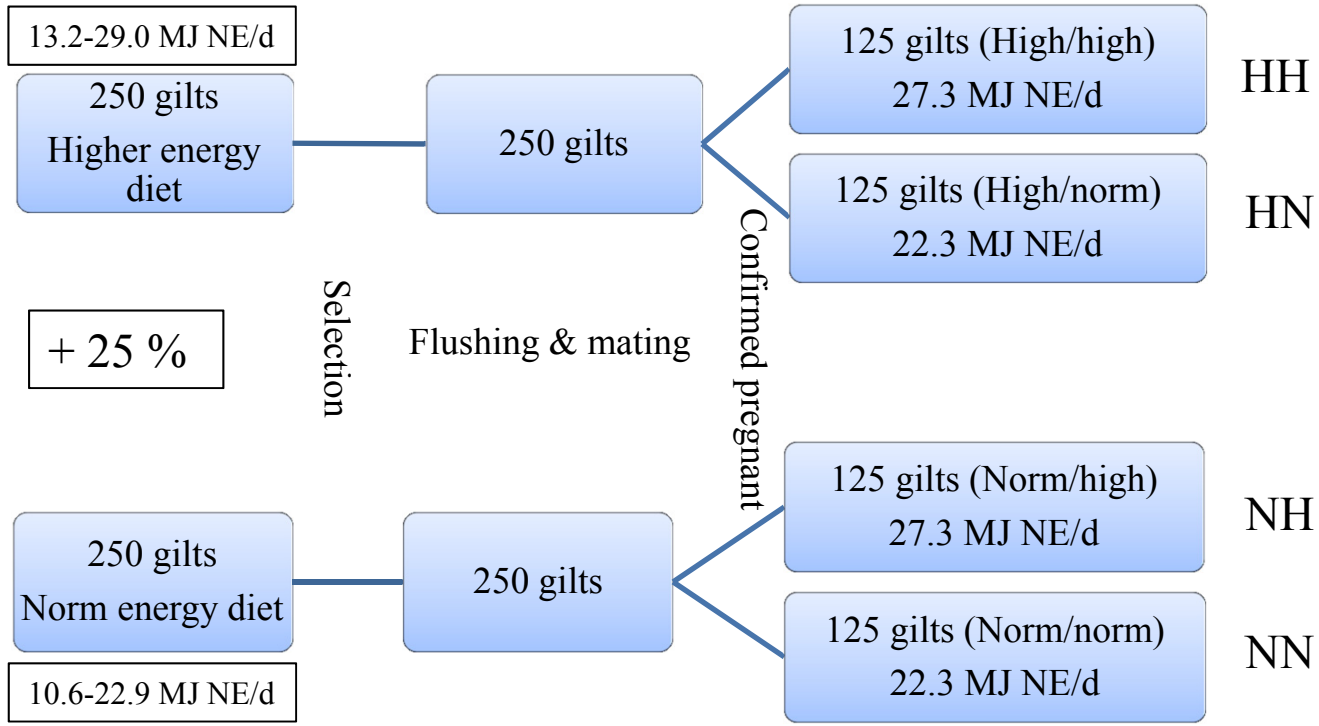
- Maternal breed: Norwegian Landrace x Yorkshire (LY)
- Genetic progress
- Feed efficient, lean and productive
- Old feed recommendations

Are present feeding recommendations still valid for the modern sow?

Introduction

- Is age and body composition at first mating important for sow productivity and longevity?
- Literature often describes five common strategies for rearing of gilts
- Our strategy: increase fat deposition without restricting the protein

Trial design



Rearing (25-110kg) → Interim period → Mid-gestation (d 42-95) → Lactation

Drawing: Siw Storøy

Materials & methods

- Data collection
  - Gilt age, weight and backfat thickness
  - Litter size and weight
  - Time of culling and reasons
- Statistical analysis
  - Repeated measures
  - Linear mixed models
  - Log-linear regression
  - Logistic regression

All results are based on field data collected in a commercial sow-pool


Photo: Norsvin

Main findings

	Norm energy diet	Higher energy diet
Selection for mating	LS mean	LS mean
Age, d	211[a]	206[b]
Backfat, mm	11.3[a]	12.4[b]

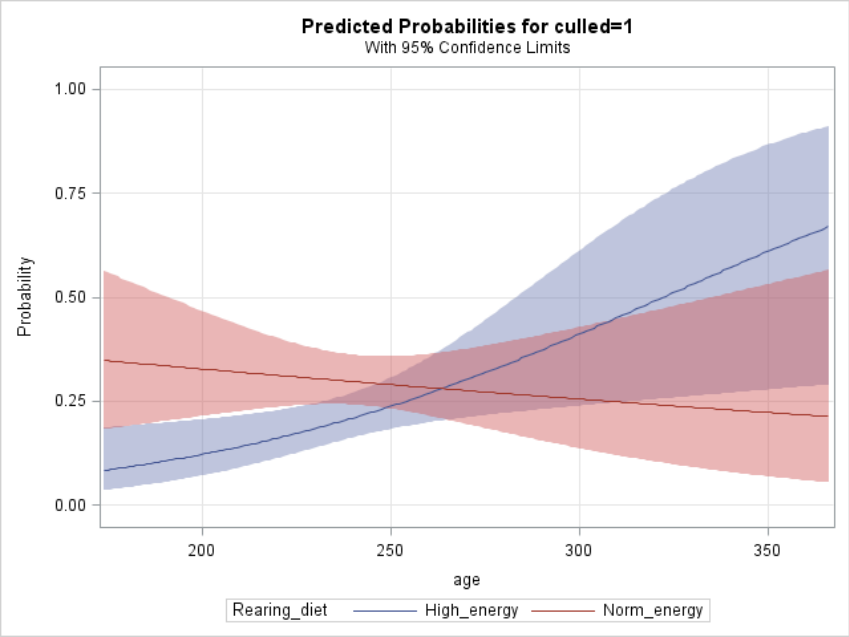
[a-b] Between columns LS means with different lettering differ $P < 0.05$

Gilt development strategy				
Day 95 of gestation	HH	HN	NH	NN
Age, d	324[a]	330[B]	330[B]	336[c]
Weight, kg	225[a]	218[b]	222[ab]	220[B]
Backfat, mm	17.7[a]	17.3[ab]	17.4[ab]	16.8[b]

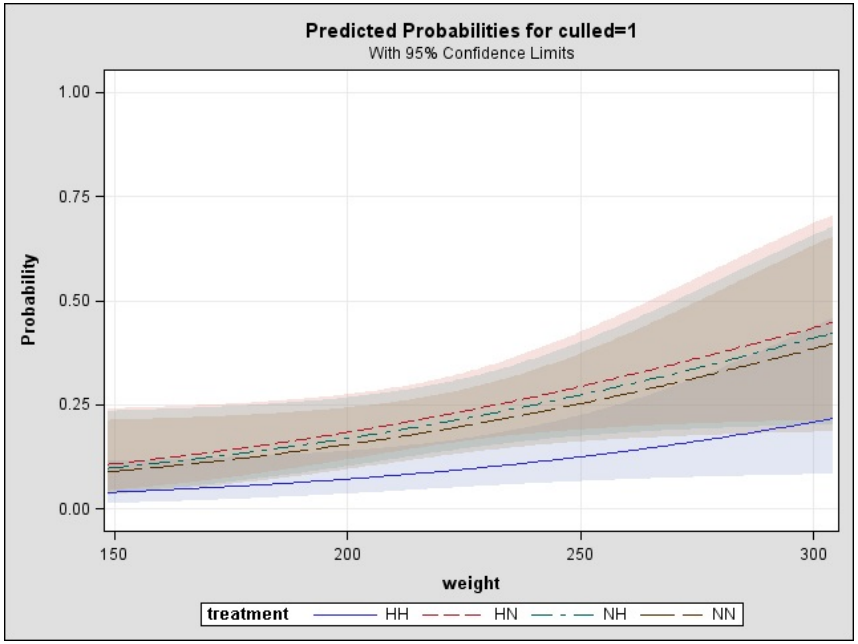
[a-b] Between columns LS means with different lettering differ $P < 0.05$
[A-B] Indicates statistical trend P – value between 0.05 - 0.10

Risk of removal at different ages and weight

Rearing strategy



Gilt development strategy



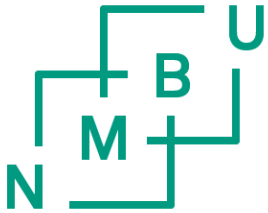
Culling reasons

	Rearing diet		Gilt development strategy			
	Norm energy	Higher energy	HH	HN	NH	NN
Reproduction						
*anestrus	1	0	1	8	5	4
*Return to estrus	1	0	0	1	1	1
*abortion	1	1	2	1	4	4
*Not in pig	4	3	1	7	4	3
Lameness & injuries						
*Lameness/foot lesions	6	3	1	2	0	0
*injuries	5	5	8	8	11	11
Other	4	5	1	3	4	5
Total	**22**	**17**	**14**	**30**	**29**	**29**

Main conclusions

- Gilts offered more dietary energy during rearing were younger and had more fat reserves at selection for mating
- Before parturition, the HH sows were the youngest, heaviest and had more backfat compared to the other three gilt development strategies
- Risk of removal tended to be lower among higher energy reared gilts
- More gilts from the HH group made the transition from first to second parity

Thank you for your attention!



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