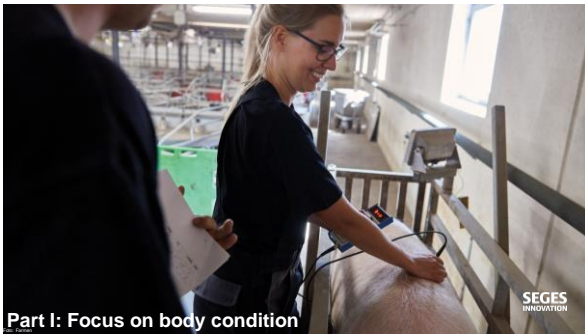




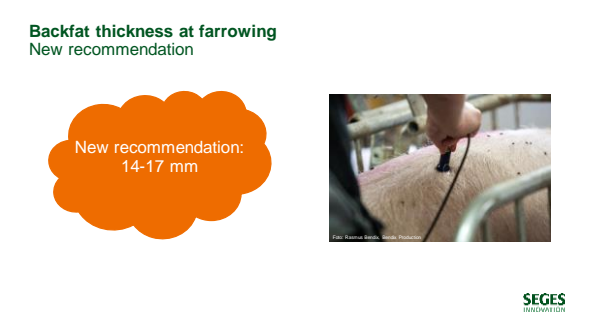
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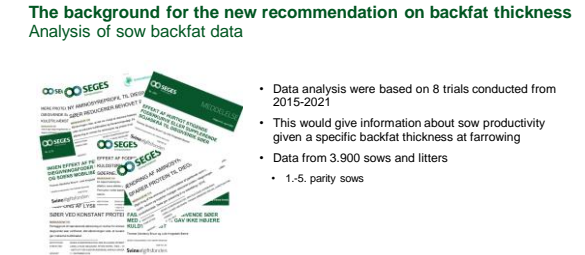
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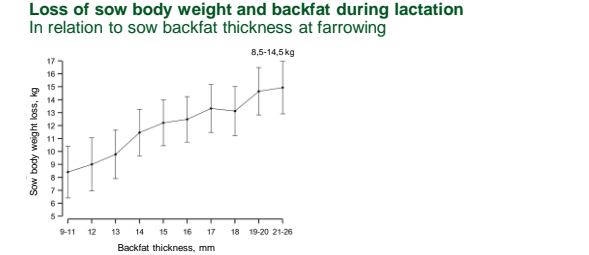
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4



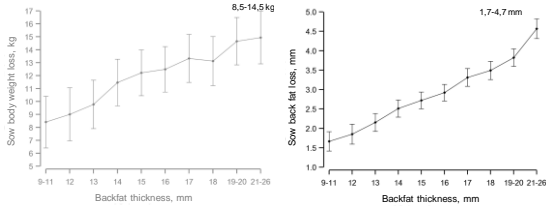
5



Source: Højgaard og Bruun (2021); Notat nr. 2130

6

Loss of sow body weight and backfat during lactation
In relation to sow backfat thickness at farrowing

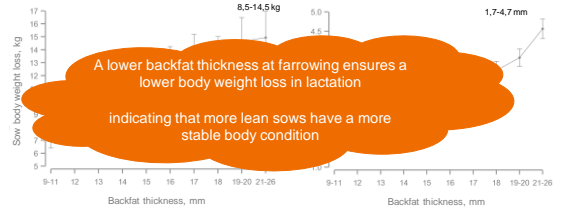


Source: Høggård og Bruun (2021); Notat nr. 2130

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7

Loss of sow body weight and backfat during lactation
In relation to sow backfat thickness at farrowing

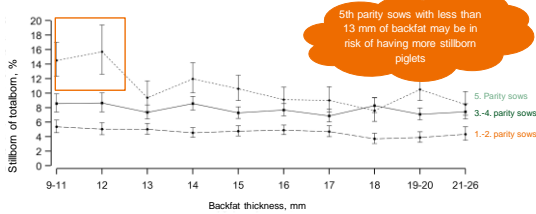


Source: Høggård og Bruun (2021); Notat nr. 2130

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8

Stillborn piglets
In relation to sow backfat thickness at farrowing

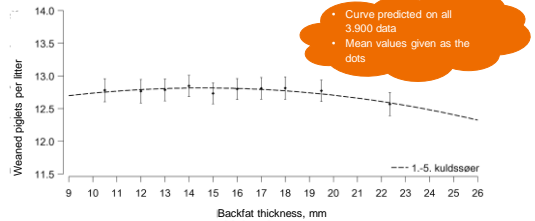


Source: Høggård og Bruun (2021); Notat nr. 2130

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9

Weaned piglets per litter
In relation to sow backfat thickness at farrowing

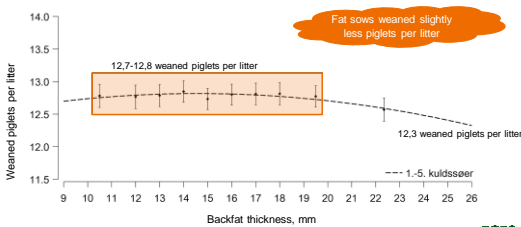


Source: Høggård og Bruun (2021); Notat nr. 2130

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10

Weaned piglets per litter
In relation to sow backfat thickness at farrowing

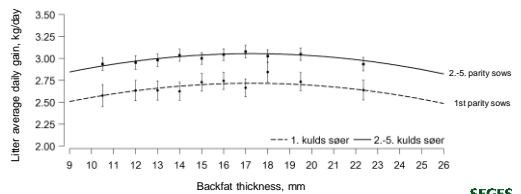


Source: Høggård og Bruun (2021); Notat nr. 2130

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11

Litter average daily gain
In relation to sow backfat thickness at farrowing

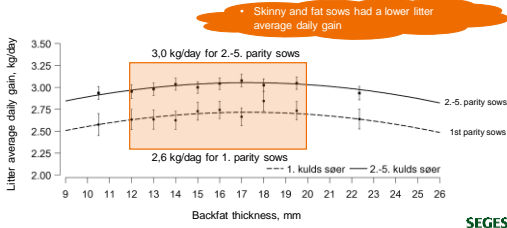


Source: Høggård og Bruun (2021); Notat nr. 2130

SEGES INNOVATION

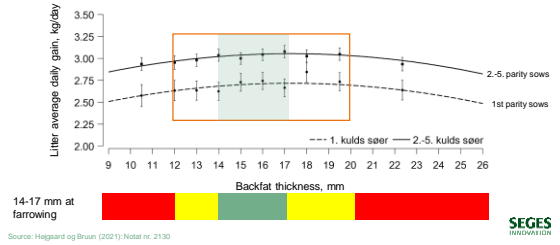
12

Litter average daily gain
In relation to sow backfat thickness at farrowing



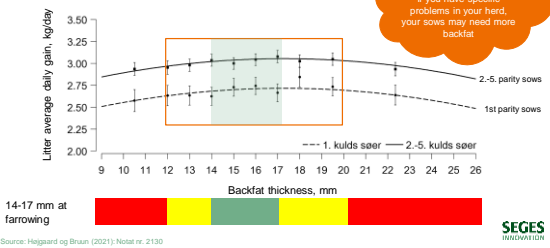
13

Litter average daily gain
In relation to sow backfat thickness at farrowing



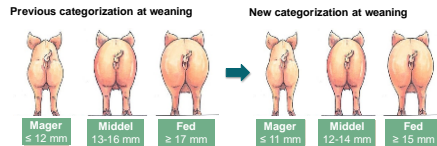
14

Litter average daily gain
In relation to sow backfat thickness at farrowing



15

New categorization of sow body condition
Adapted to reach the optimal 14-17 mm of backfat at farrowing



16

Recommended feeding curves for gestating sows
Only the backfat thicknesses have changed - not the recommended feeding curves

| Backfat thickness at weaning | Skinny ≤ 11 mm | Normal 12-14 mm | Fat ≥ 15 mm |
|---|---------------------|-----------------|------------------|
| FU _{sow} per day, day 0-30 | 4,5 | 3,0 | 2,5 |
| FU _{sow} per dag, day 30-84 | 2,3 * | 2,3 | 2,3 |
| FU _{sow} per day, day 84-farrowing | 3,5 | 3,5 | 3,5 |

* If a sow is still skinny at day 30 (<13 mm), then the sow should have a feed allowance of 3.5 FU_{sow} per day until 14 mm of backfat is reached. For these sows, it is recommended to have an extra backfat scanning at day 60.

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17

Recommended feeding curves for gestating sows
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| FU _{sow} per dag, day 30-84 | 2,3 * | 2,3 | 2,3 |
| FU _{sow} per day, day 84-farrowing | 3,5 | 3,5 | 3,5 |
| Regained backfat thickness, in total | -4-5 mm | -2-3 mm | -0-1 mm |

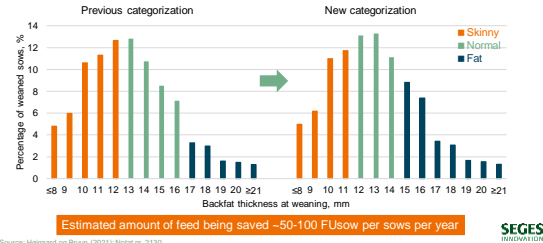
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18

Effect of categorization of body condition at weaning on number of sows in the different categories

Indirect effect on feed used during gestation based on 3900 sows



19

Recommended feeding curves for gilts

Backfat thickness and body weight may not increase drastically

Gilts should be mated in second heat, 220-240 days old, 140-160 kg and 13-15 mm of backfat

- Feeding curve day 0-30
 - 2,2-2,4 FUsow per day dependent on size
- Feeding curve day 30-84 – dependent on body condition at day 30 (given in parenthesis)
 - Minimal/no gain wanted (16-17 mm): 2,0-2,1 FUsow per day
 - Moderate gain in weight and backfat (14-15 mm): 2,3 FUsow per day
 - Small and skinny at mating → extra gain wanted (10-13 mm): 2,5-2,7 FUsow per day
- Feeding curve day 84 to farrowing
 - 3,5 FUsow per day



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20

Implementing optimal feed management requires insight

Different stables and feeding systems require individual solutions

Mating/control unit – one box per sow
 Boxing of sows the first 20 days are legal in stables build before 2015
 Dry feeding: Individual feeding curves and adjustment of backfat
 Liquid feeding: One feeding curve per feed valve. Uniform sows per valve

Floor feeding/liquid feeding in a long trough
 No. of pens per batch are important for sorting of sows (young and old; skinny, normal, fat)
 The fat and/or dominant sows are challenging → Have a strategy to move them out of the pen

One box per sow/Opti-pens – lock each box while feeding
 Boxing of sows the first 28 days are legal in stables build before 2015
 Dry feeding: Extra feed (1,5 kg) to skinny sows – mark the skinny sows with a colour
 Liquid feeding: Extra feed (1,5 kg) to skinny sows – mark the skinny sows with a colour

ESF
 Optional number of feeding curves
 You can change curve for the individual sow

File: Farrow/Parce Brain

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21

Implementing optimal feed management requires insight

Different stables and feeding systems require individual solutions

Conclusion

SEGES recommends 14-17 mm of backfat at farrowing for both gilts and sows

- Maximum productivity and lower feed consumption → high effectivity
- Less sows with great losses of body weight and back fat → more sows with average body condition at all times
- You save 20-25 FUsow every time a sow does NOT need to regain 1 mm of backfat

File: Farrow/Parce Brain

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22



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23

Why does two sows not react the same way on the same amount of feed?

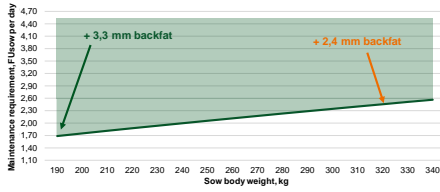
Maintenance requirement ≈ when a car is turned on but not driving
Some amount of diesel is required – the amount depends on the size of the car

Performance (body growth, back fat gain, fetal growth, milk production)
It all comes from feed given above maintenance

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24

Impact of 4,5 FUsow per day on backfat gain (day 0-30)
Is highly affected by sow body weight and thereby age

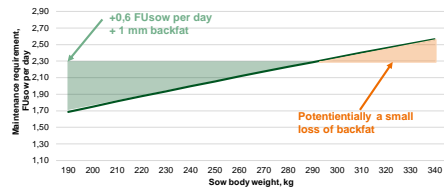


Bonus-info: It costs approx. 20-25 FUsow above maintenance requirement to gain 1 mm of backfat (results from Peter Theil's research group at AU)



25

Impact of 2,3 FUsow per day on backfat gain (day 30-84)
Is highly affected by sow body weight and thereby age

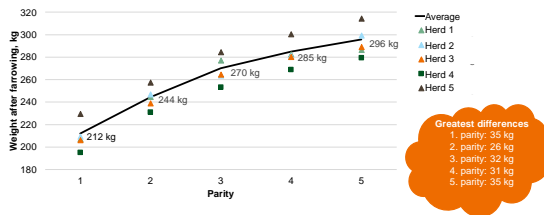


Bonus-info: It costs approx. 20-25 FUsow above maintenance requirement to gain 1 mm of backfat (results from Peter Theil's research group at AU)



26

Development in sow body weight from 1st to 5th farrowing
Gilt body weight at mating and at farrowing is important

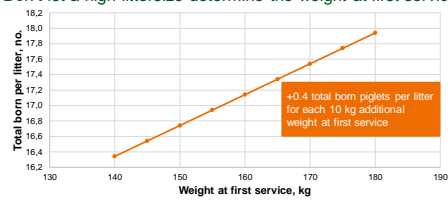


Source: Differentials conducted from 2015-2021



27

Weight at first service is important for the weight development in your herd
Don't let a high litter size determine the weight at first service

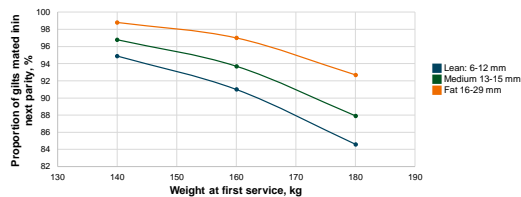


Source: Braun et al. (2020); SEGES Publication no. 1206



28

Looking at potential longevity as an effect of weight at first service
Body condition makes quite a difference for sow longevity

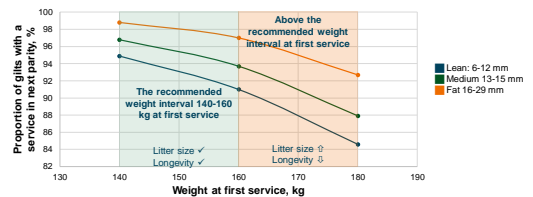


Source: Braun et al. (2020); SEGES Publication no. 1206



29

Looking at potential longevity as an effect of weight at first service
Body condition makes quite a difference



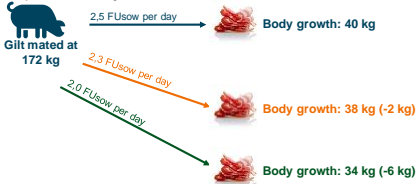
Source: Braun et al. (2020); SEGES Publication no. 1206



30

Development in sow body weight in first gestation
 What is the consequence when reducing the feeding curve day 30-84
 SID lysine is at 4,0 g per FUsow

In mid gestation we recommend to vary the feeding curve from 2,0-2,7 FUsow per day according to size and body condition of the gilt



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31

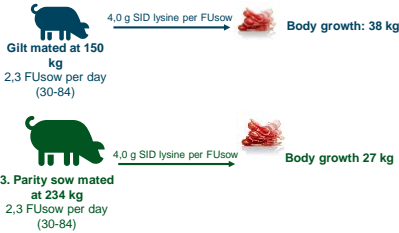
Development in sow body weight in first gestation
 What is the consequence when reducing the feeding curve day 30-84
 SID lysine is at 4,0 g per FUsow

Conclusions
 Keep focusing on gilt body weight and backfat at first service
2. estrus, 140-160 kg and 13-15 mm
 The feeding curve in mid gestation can a tool to reduce the growth of the gilts

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32

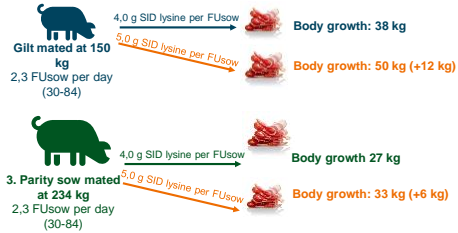
Development in sow body weight during gestation
 Consequences of dietary lysine and protein



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33

Development in sow body weight during gestation
 Consequences of dietary lysine and protein



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34

Development in sow body weight during gestation
 Consequences of dietary lysine and protein

Conclusion
 Follow the recommended 4,0 g SID lysine and 90 g SID protein
 Feeding high concentration of lysine and protein will result in heavier and more muscular sows

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35

Extra feed the last 4 weeks before farrowing increases sow body weight
 More than 3,5 FUsow per day does not increase piglet birth weight

+1 FUsow per day the last 4-4,5 weeks before farrowing increase sow body weight by 7-8 kg in each parity

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36

You are the one to manage sow body condition and body growth
 - The stable, feeding system and the sow will give some variation



Feeding curve during gestation



Dietary concentration of lysine and protein during gestation



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Illustration: Catherine Fosse, Fabrice

37

You are the one to manage sow body condition and body growth
 - The stable, feeding system and the sow will give some variation



Feeding curve during gestation



Dietary concentration of lysine and protein during gestation



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Illustration: Catherine Fosse, Fabrice

38

Take home messages

Focus on sow body condition and body growth to ensure a high productivity and low feed consumption

- 14-17 mm of backfat at farrowing for both sows and gilts
 - Keep focusing on shoulder lesions
 - New categorization of body condition at weaning
 - Skinny: ≤11 mm, Normal: 12-14 mm, Fat: ≥ 15 mm
 - Uniform gilts at first service
 - Second heat - Age 220-240 days
 - Backfat 13-15 mm
 - Weight 140-160 kg
- Optimize your feed management in gestation unit
- Sort out sows and gilts according to body condition
 - Use correct feeding curves
 - Backfat scan sows and gilts at mating, day 30 and at farrowing
- Avoid excess lysine and protein during gestation
- Save 6-12 kg of muscle growth in each gestation
 - Sows will easier regain lost backfat

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39

Take home messages

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40

New projects coming...

- AU: Protein- og aminoacid requirements in late gestation
- SEGES Innovation: Protein- og amino acid requirement in early and mid gestation
- SEGES Innovation: Energy requirement in mid gestation

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41