Effect van variërend zoutgehalte op groeiprestaties en mestconsistentie van biggen

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Waarom?

TABLE 16-5A Dietary Mineral, Vitamin, and Fatty Acid Requirements of Growing Pigs Allowed Feed Ad Libitum (90% dry matter)

Item	Body Weight Range (kg)						
	5-7	7-11	11-25	25-50	50-75	75-100	100-135
NE content of the diet (kcal/kg)[a]	2,448	2,448	2,412	2,475	2,475	2,475	2,475
Effective DE content of diet (kcal/kg)[a]	3,542	3,542	3,490	3,402	3,402	3,402	3,402
Effective ME content of diet (kcal/kg)[a]	3,400	3,400	3,350	3,300	3,300	3,300	3,300
Estimated effective ME intake (kcal/day)	904	1,592	3,033	4,959	6,989	8,265	9,196
Estimated feed intake + wastage (g/day)[b]	280	493	953	1,582	2,229	2,636	2,933
Body weight gain (g/day)	210	335	585	758	900	917	867
Body protein deposition (g/day)	—	—	—	128	147	141	122
	Requirements (% or amount per kilogram of diet)						
Mineral elements							
Sodium (%)	0.40	0.35	0.28	0.10	0.10	0.10	0.10
Chloride (%)	0.50	0.45	0.32	0.08	0.08	0.08	0.08

NRC, 2012

	5 - 11 kg LG	11 - 25 kg LG
Mineralen (g/kg)		
Mg	1,1	1,1
Na	2,4	1,1
Cl	3,2	3,2
K	3,3	2,9
Spoorelementen (mg/kg)		
Fe	110	110
I	0,15	0,15
Mn	22	22
Se	0,28	0,24

*: Een voedernorm is de behoefte plus een veiligheidsmarge.

CVB, 2016

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Estimated effective ME intake (kcal/					
Estimated feed intake + w					
Body weight gain (g/day)					
Body protein deposition (g					
Mineral elements					
Sodium (%)				0.10	0.10
Chloride (%)			0.08	0.08	0.08

quadratic polynomial model suggested the maximum at 0.38% Cl. In conclusion, 7 to 12 kg pigs fed diets that contained at least 0.35% Na and 0.38% Cl had greater ADG and G:F compared to pigs fed diets with lower concentrations and minimal effects were observed among the sources of Na or Cl used in these studies.

Shawk et al., 2019

NRC, 2012

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CVB, 2016

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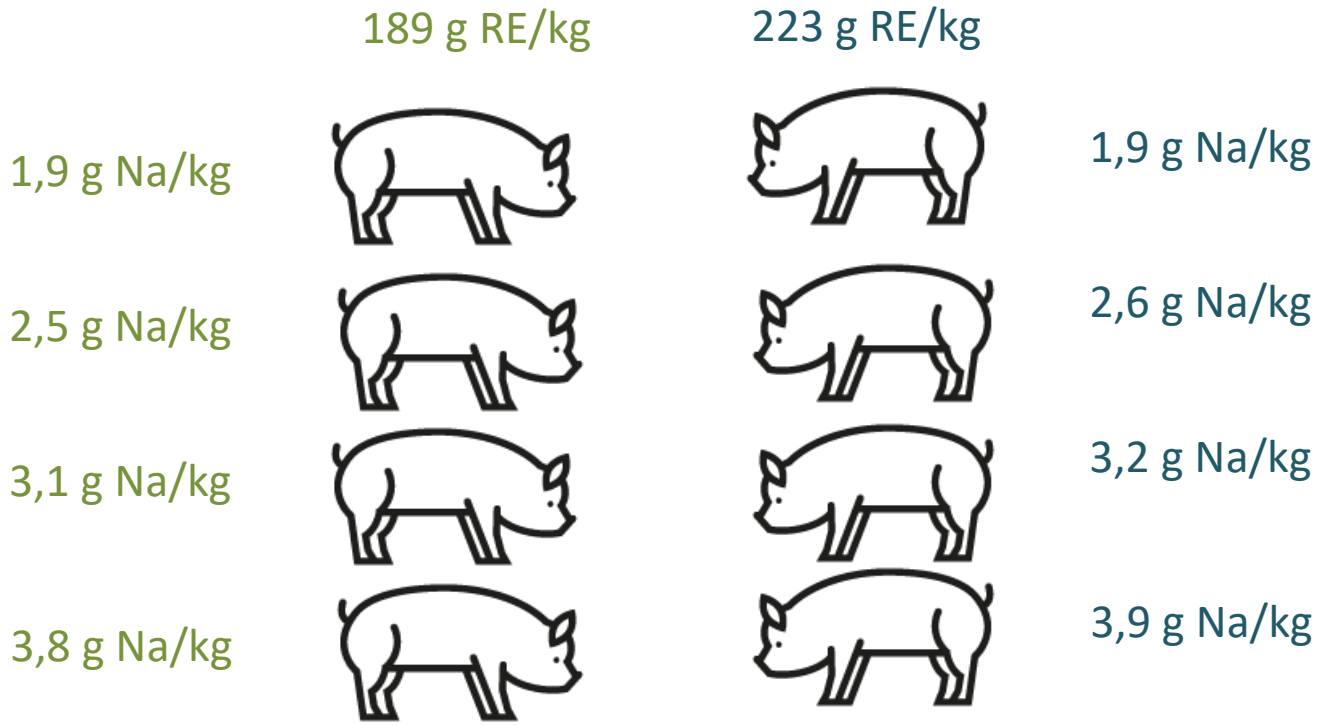
Behoefte afhankelijk van ruw eiwitgehalte?

→ experiment met 2 eiwitgehaltes x 4 zoutgehaltes



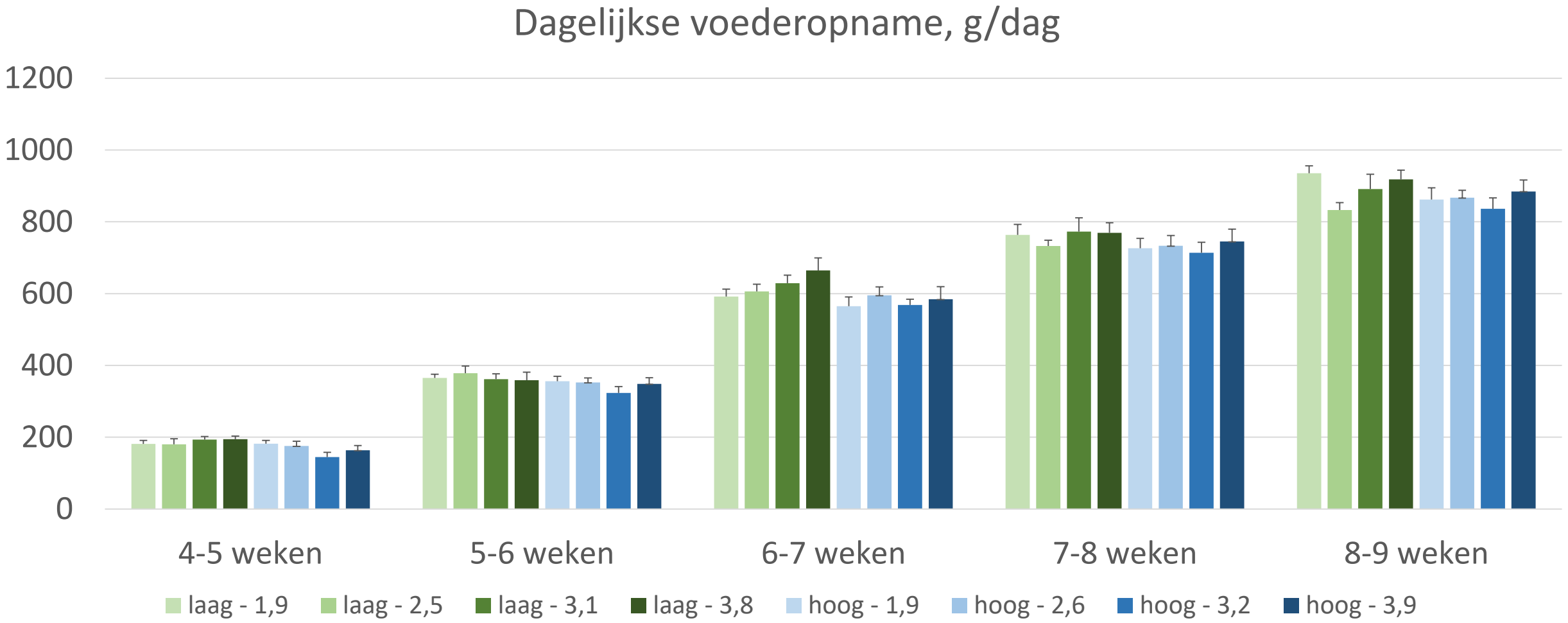
Proefopzet

→ 12 hokken per behandeling

→ 4-9 weken

Na, g/kg	**1,9**	**2,5**	**3,1**	**3,8**	**1,9**	**2,6**	**3,2**	**3,9**
Ruw eiwit, g/kg	189	189	189	189	223	223	223	223
SID Lys, g/kg	11,80	11,80	11,80	11,80	12,50	12,50	12,50	12,50
Netto Energie, MJ/kg	9,85	9,85	9,85	9,85	10,40	10,40	10,40	10,40
SID Lys:RE	0,064	0,064	0,064	0,064	0,057	0,057	0,057	0,057
SID Lys:NE, g/MJ	1,20	1,20	1,20	1,20	1,20	1,20	1,20	1,20

Resultaten



Eiwit: P<0,001 Zout: NS

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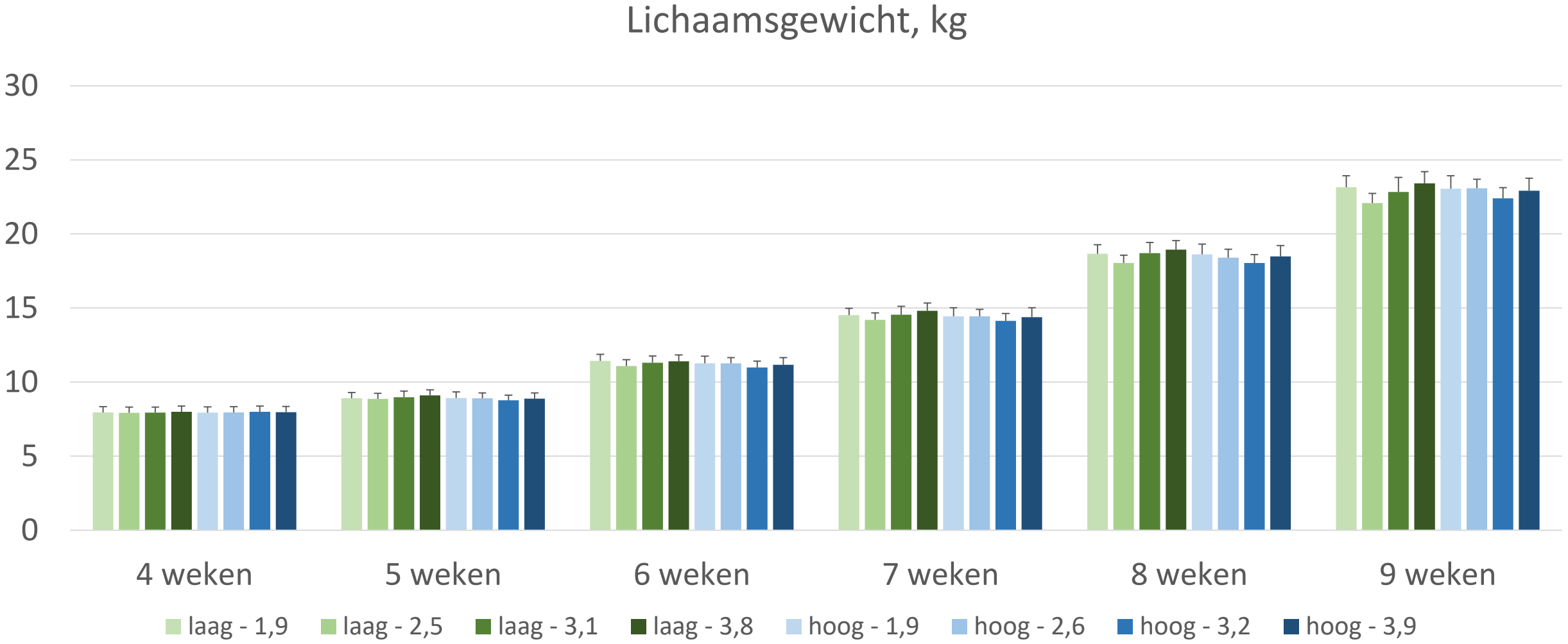
Resultaten



Eiwit: NS

Zout: NS

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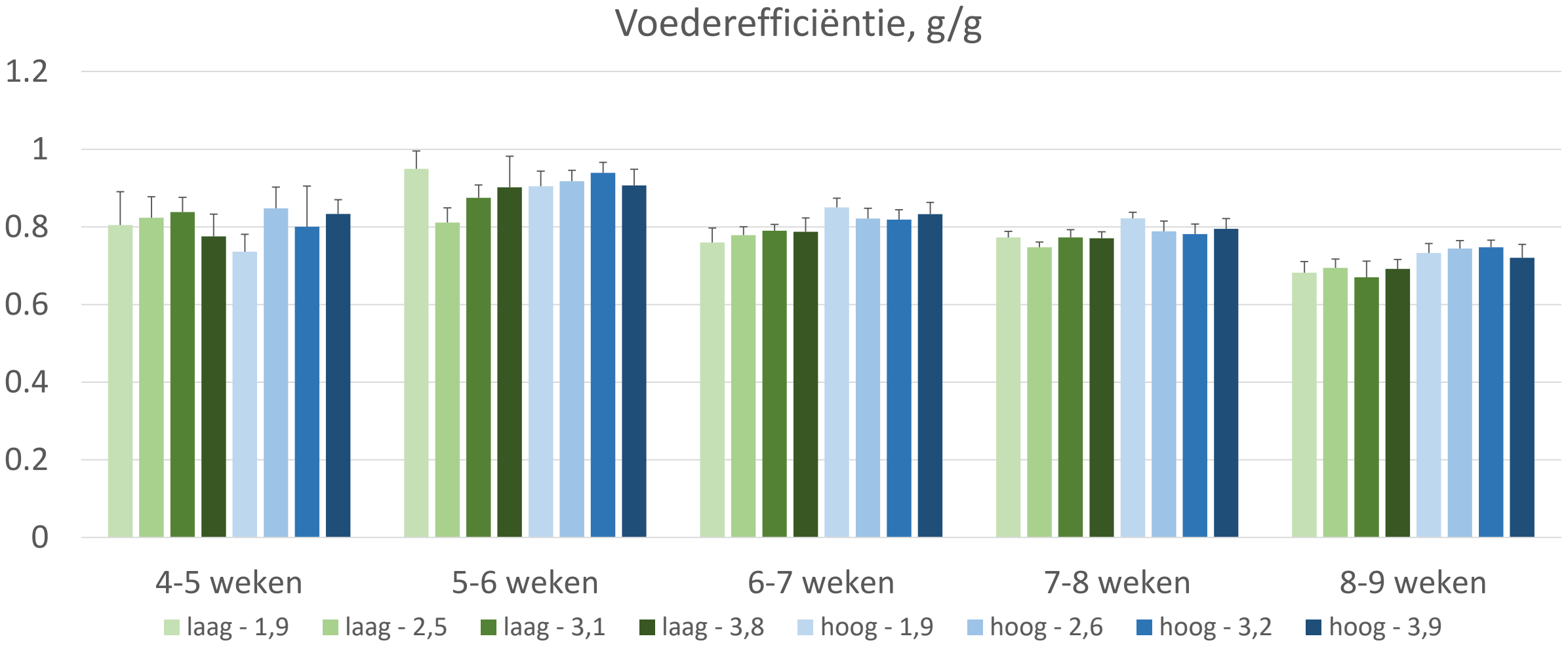
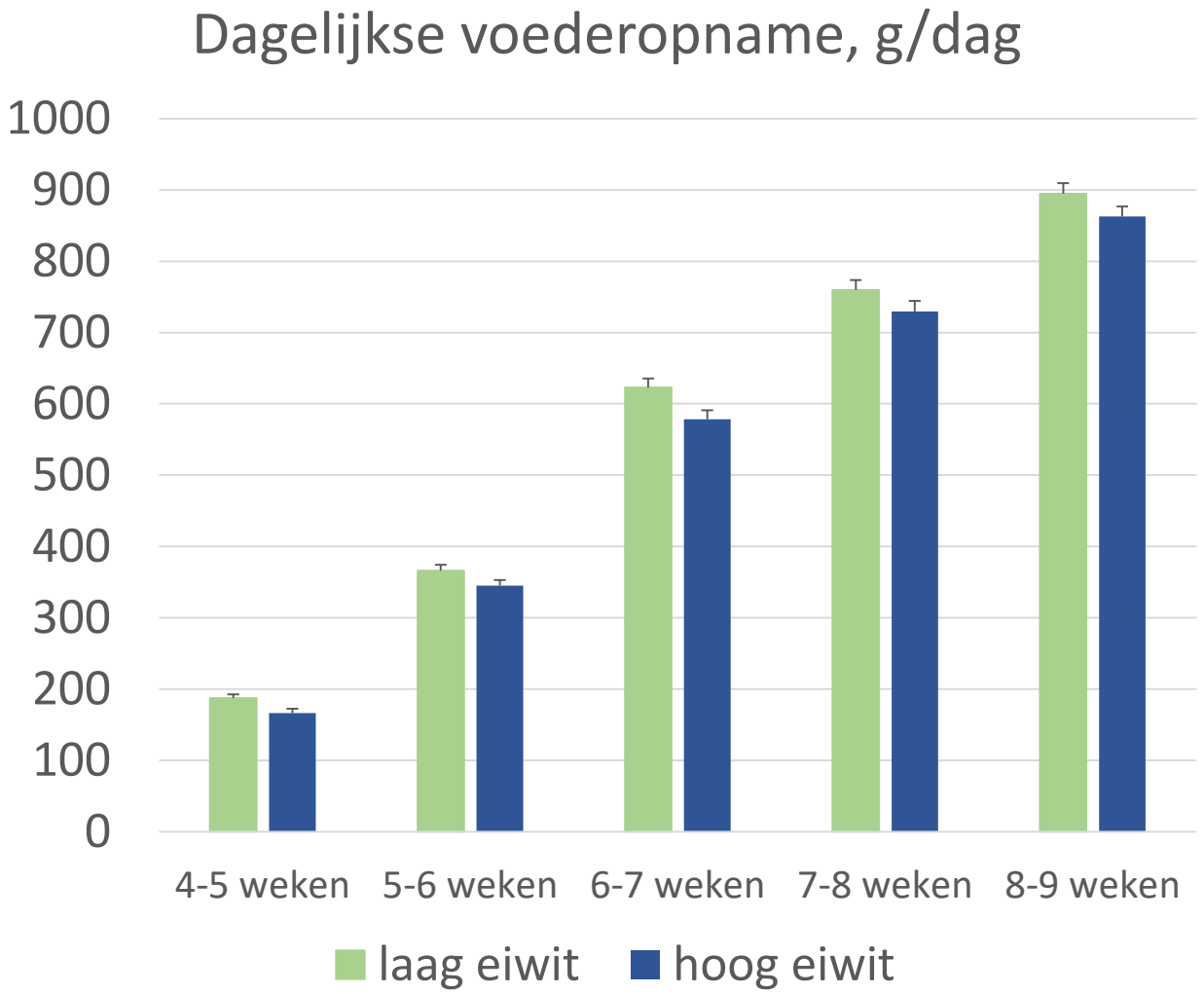
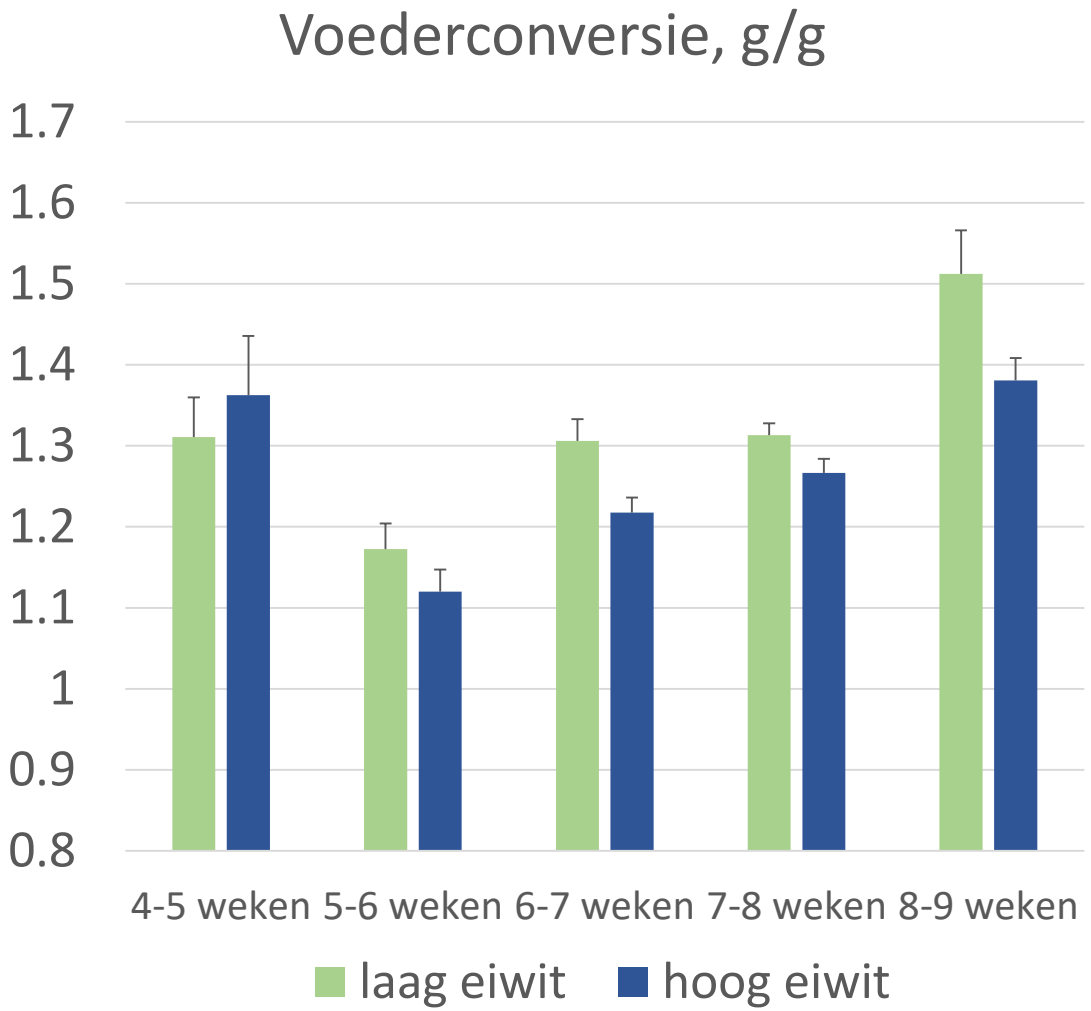
Resultaten



Eiwit: P=0,011 Zout: NS

Resultaten





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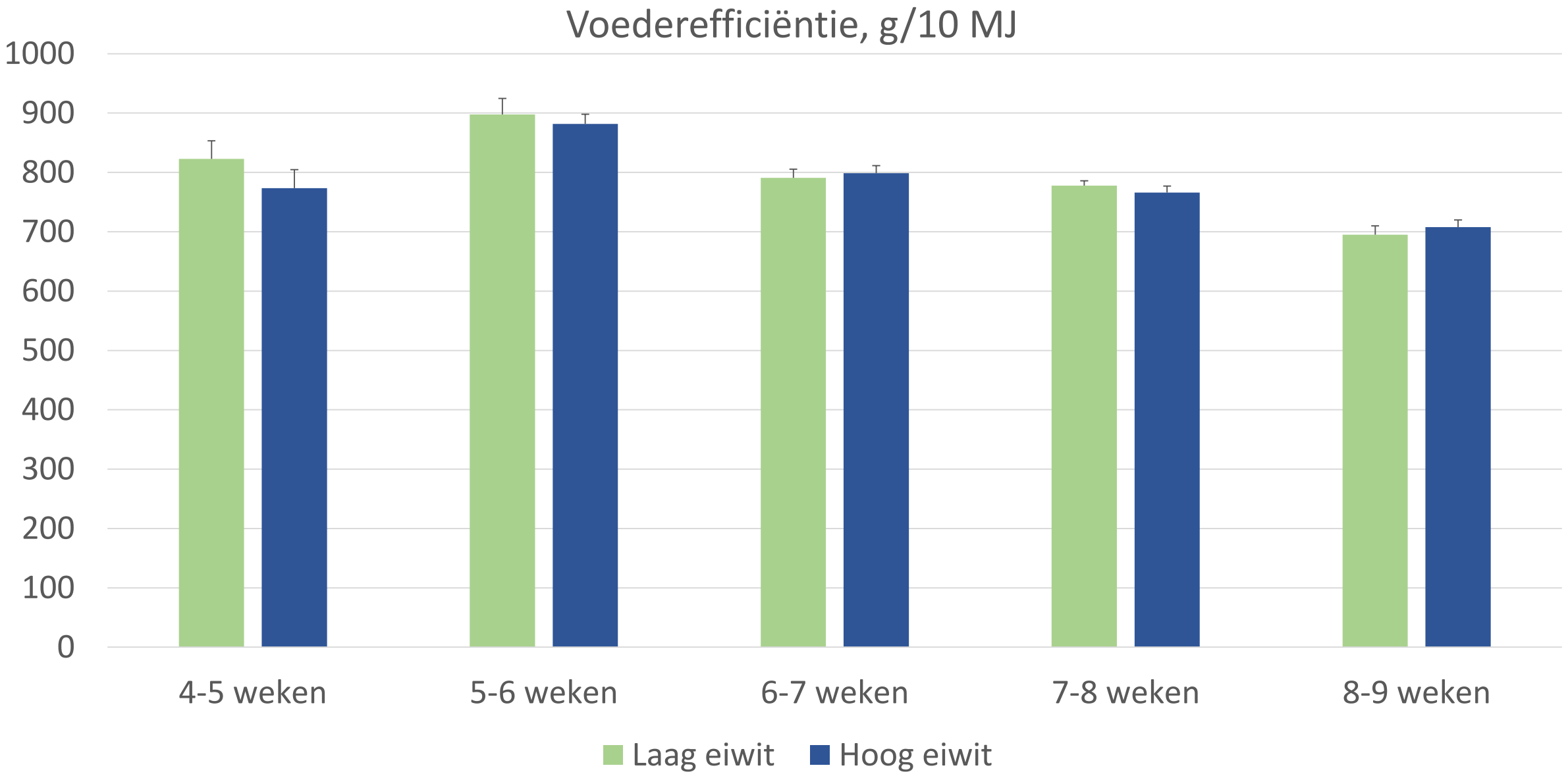

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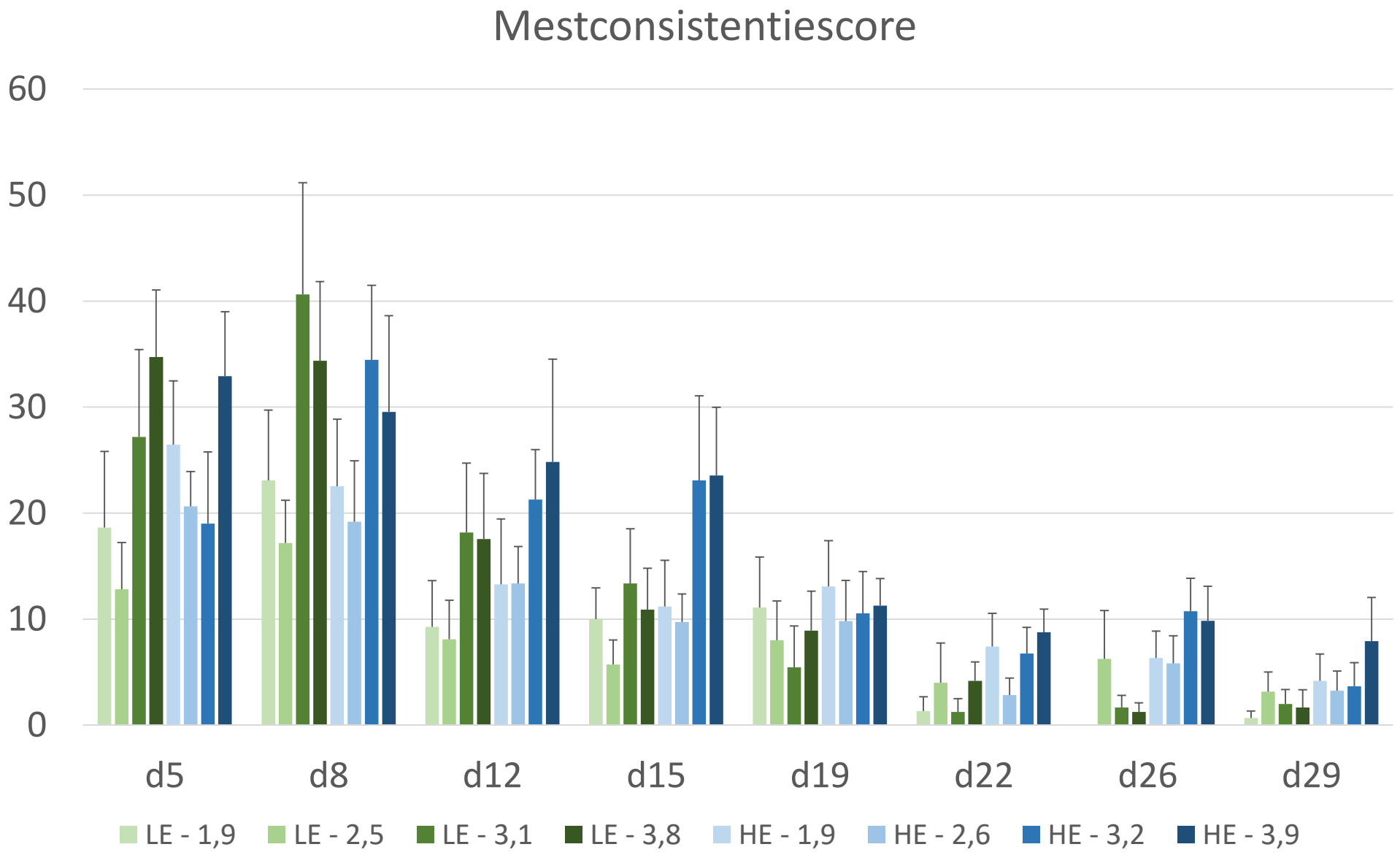
Resultaten

Eiwit: 0,719

Zout: 0,021



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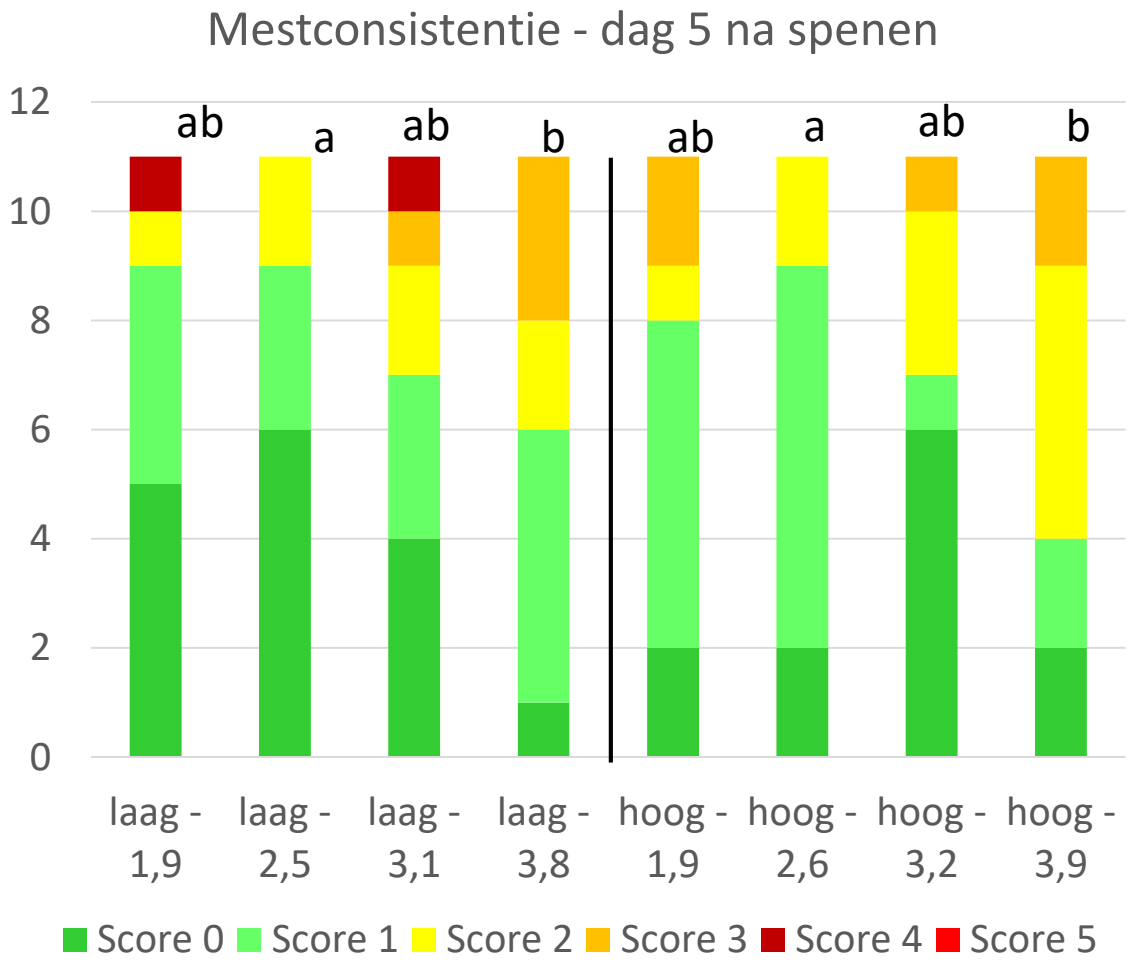

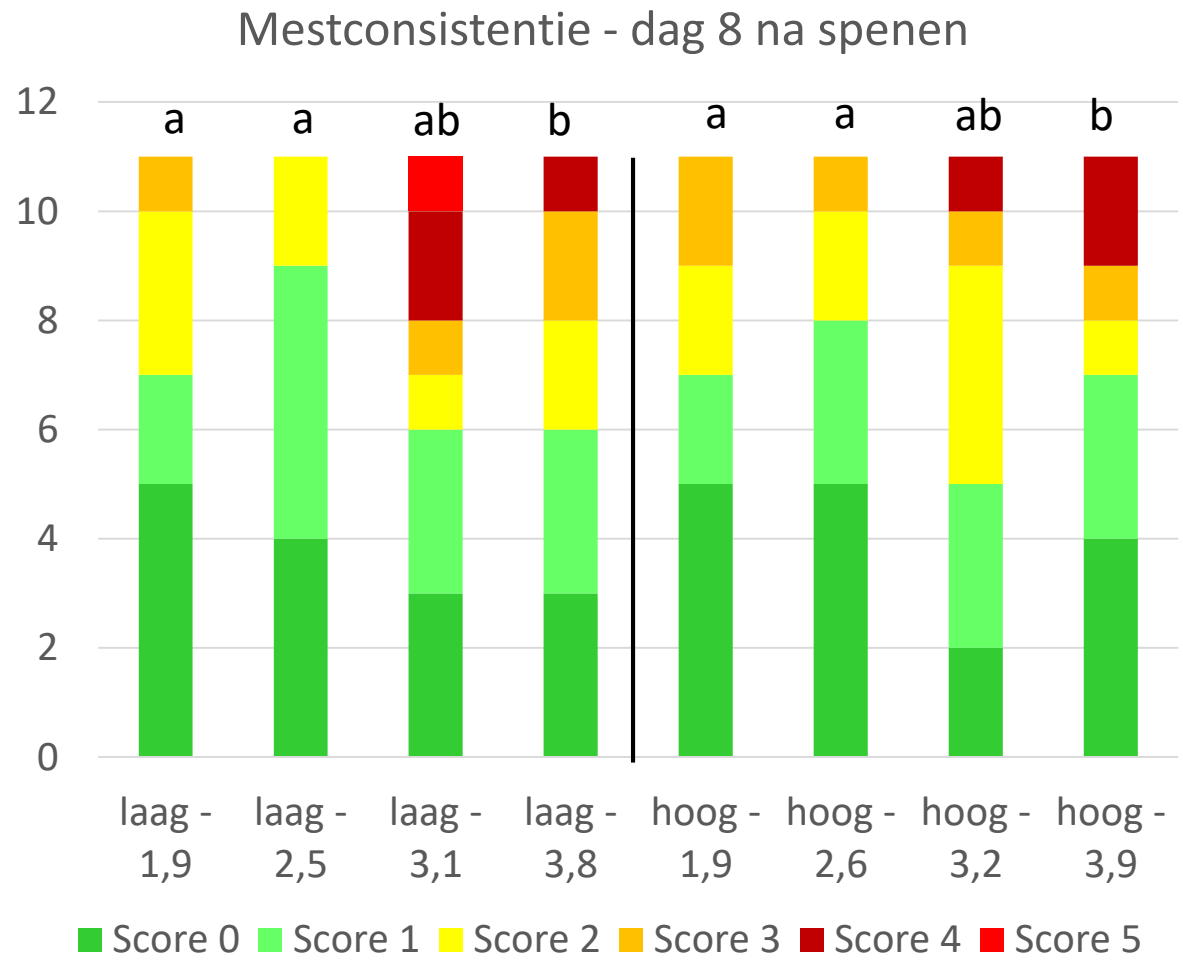

0= normaal/vast 1= tamelijk vast 2=yoghurt 3=platter dan yoghurt 4=geel/waterachtig 5=erg waterachtig

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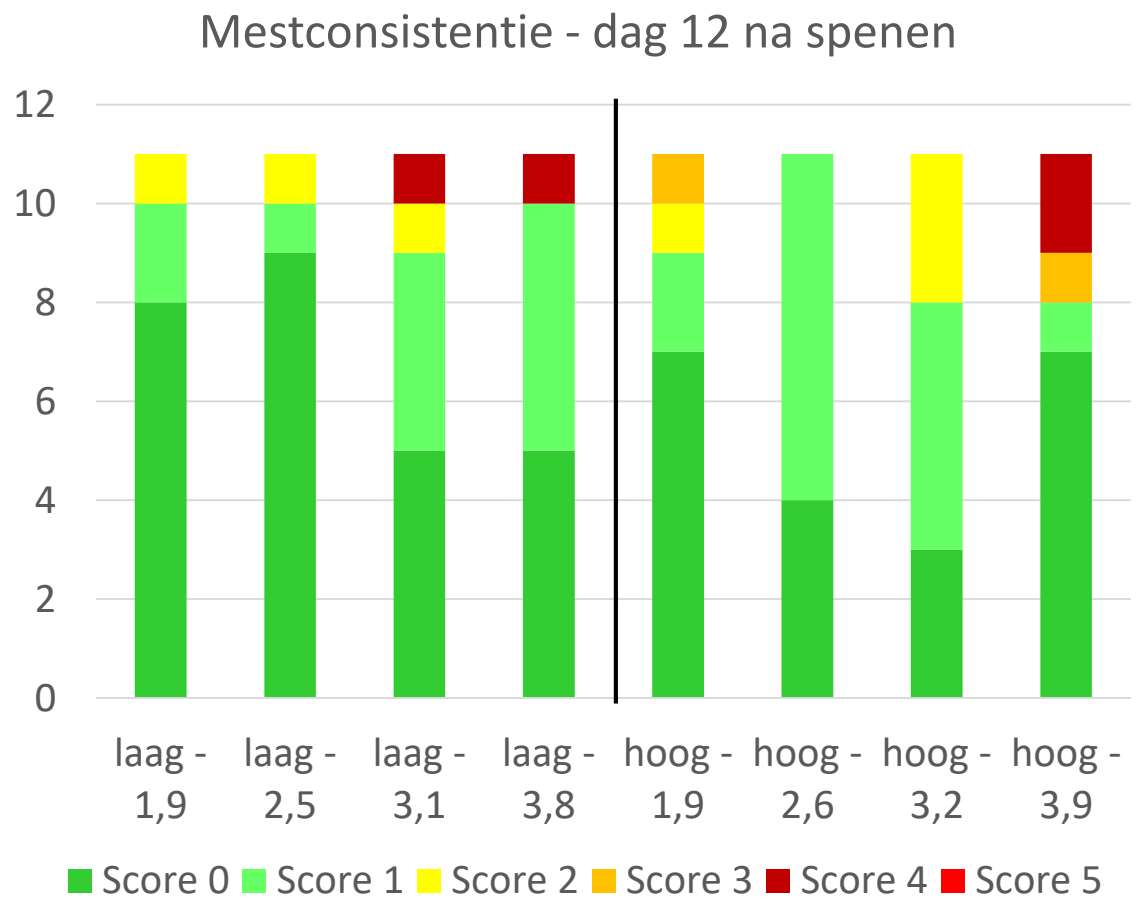
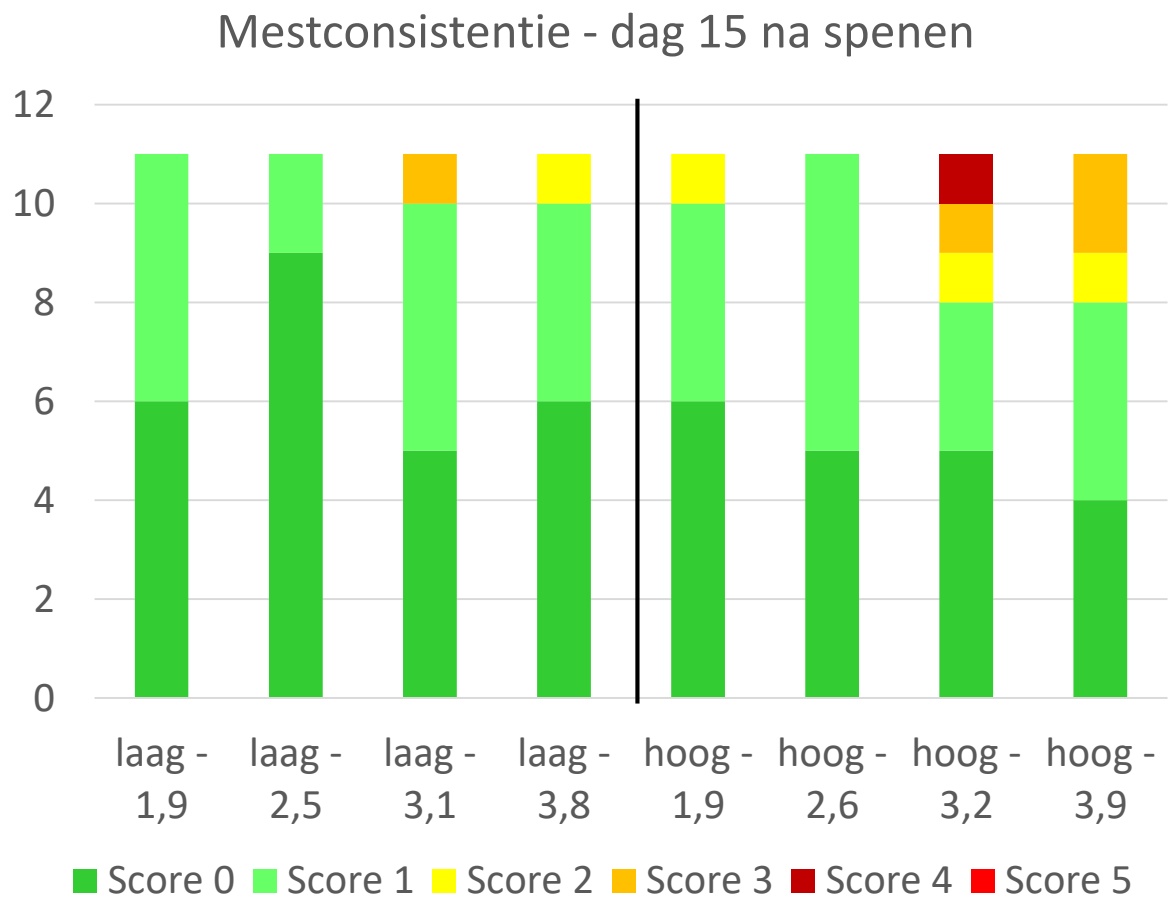
Resultaten





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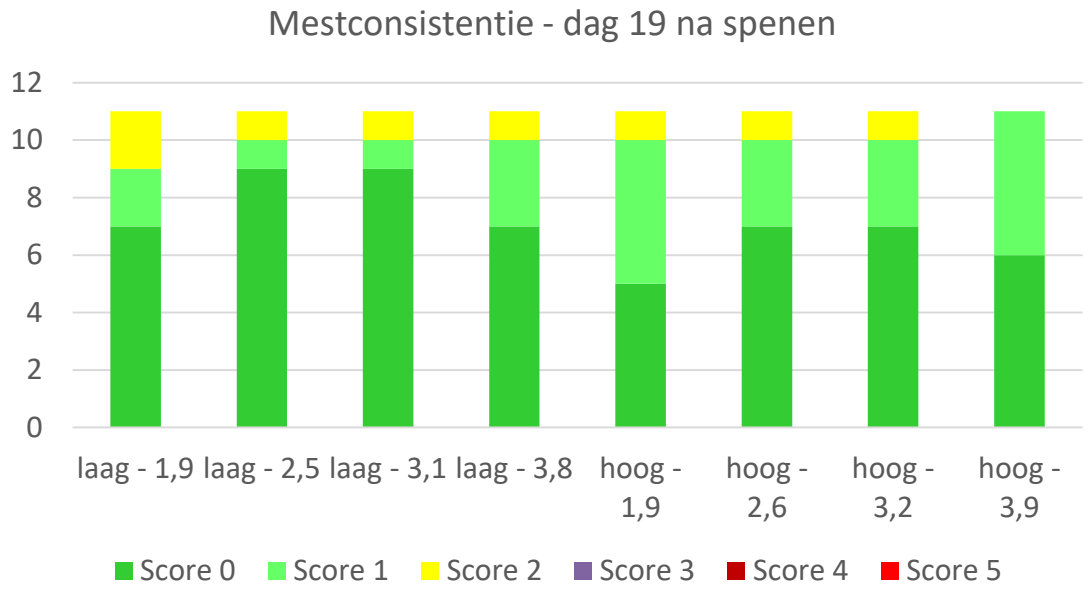

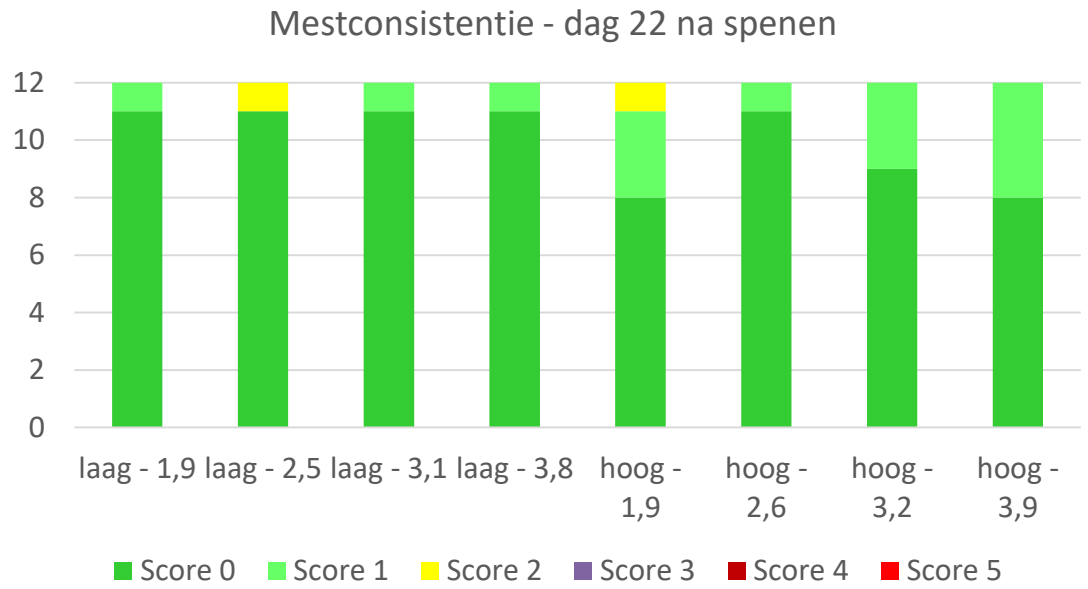

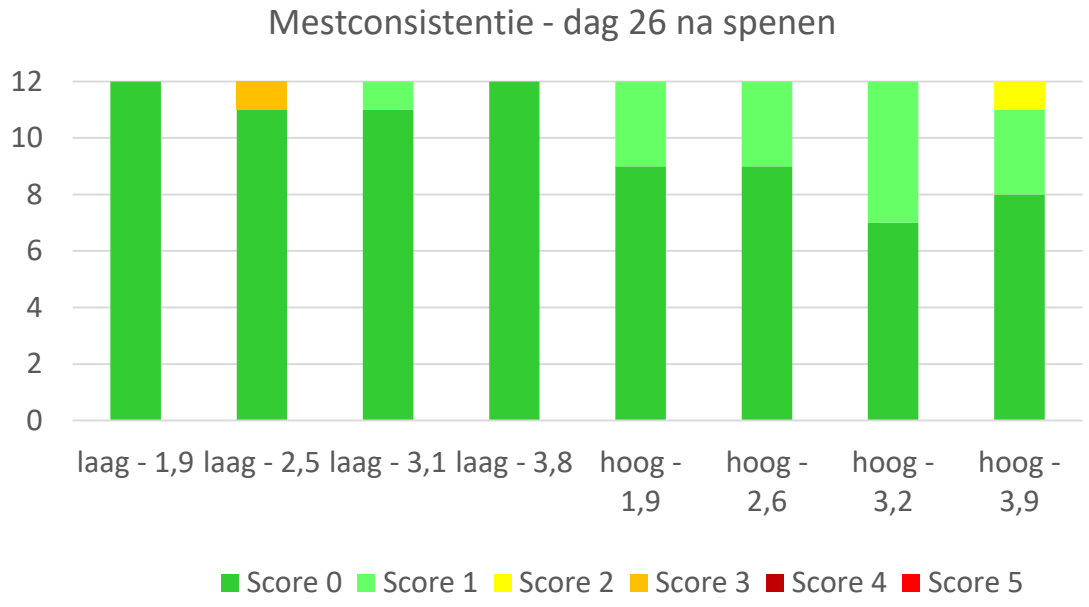

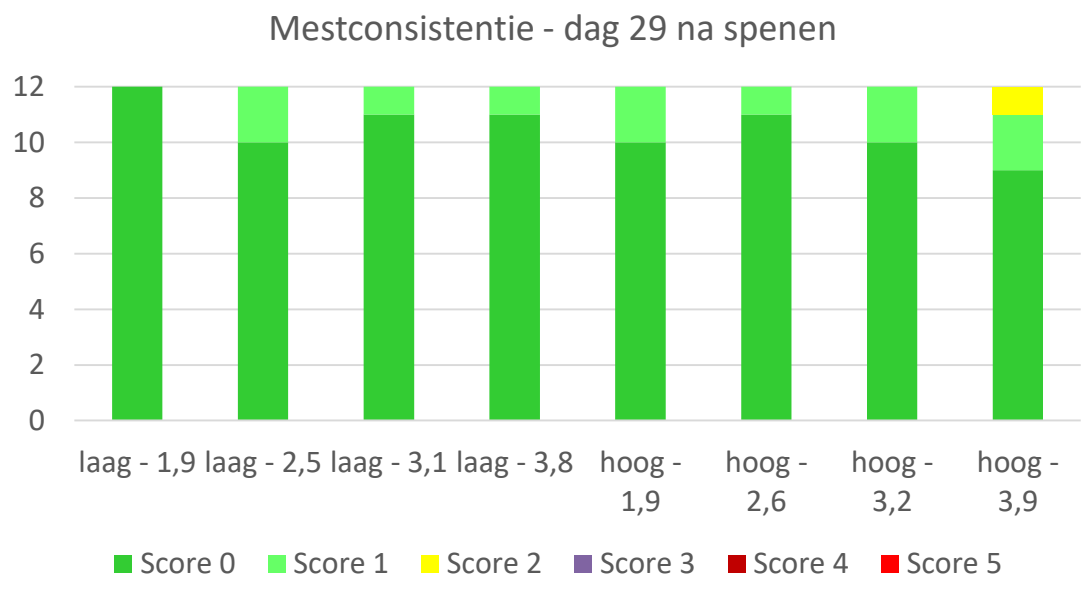

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Discussie

- Geen aantoonbaar effect van zoutgehalte op groeiprestaties
  ←→ VS studies: speenleeftijd?/ gebruik ZnO

- Negatief effect op mestconsistentiescore
  – Verminderde (zout)absorptie? → osmotische druk?

- Op dit moment geen indicaties om zoutgehalte op te trekken

Bedankt voor uw aandacht