White-flowering faba beans *(Vicia faba L.)* in sow diets – preliminary results

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Background

Faba beans – home-grown protein feed

Faba beans not recommended in sow diets

Studies in the ’70s - reduced litter size and milk yield

- high inclusion
- replacing soy + meat and bone meal + fish meal
- no methionine compensation
- high tannin beans (dark-flowering)

White-flowering faba beans in sow diets
– no documentation on effects!

White-flowering faba beans lack tannin
- tannin negative impact on (protein) digestibility
- tannin may affect reproduction

Both white- and dark-flowering faba beans
low in methionine

The experiment

- Diet with **faba beans** (no soy bean meal) *vs* diet with **soy bean meal** (no faba beans)
- 20+20 Y sows, mixed parities (2-5)
- One diet system
- Diets fed from service until weaning of 2nd experimental litter

Diet composition

Ingredient, %	Soy	Faba beans
Barley	24.2	17.0
Wheat	46.9	47.2
Wheat bran	4.1	4.1
Wheat middlings	4.0	4.3
Wheat DDGS	4.1	4.4
Rape seed meal (00)	4.0	7.4
Soy bean meal	**8.07**	**0**
White faba beans	**0**	**10**
Sugar beet fibre	1.01	1.00
Soya oil	0.00	0.12
Lysine	0.20	0.21
Veg. fatty acids	1.49	1.65
Phytase premix	0.30	0.30
Minerals and vitamins	2.43	2.38

Dietary content, analyzed (calculated)

		Soy		Faba beans	
Dry matter	g	882		882	
Crude fat	g	411		442	
Crude protein	g	149	(157)	150	(158)
Crude fibre	g	40.3		48.4	
Lysine	g	7.7	(7.8)	7.8	(8.0)
Threonine	g	5.2		5.3	
Methionine	g	2.2	(2.4)	2.2	(2.4)
Cystine	g	3.1		3.1	
ME	MJ	(12.6)		(12.6)	

Results, first of two parities - Sows

	Soy	Faba beans	Significance
Sow live weight at service, kg	218	220	ns
after farrowing, kg	267	265	ns
at weaning (5 weeks), kg	250	244	ns
Sow backfat at service, mm	11.9	13.4	ns
after farrowing, mm	16.2	16.1	ns
at weaning (5 weeks), mm	13.3	12.3	ns
Interval weaning to service, days	4.1	4.5	ns

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”Lost some more kgs..”

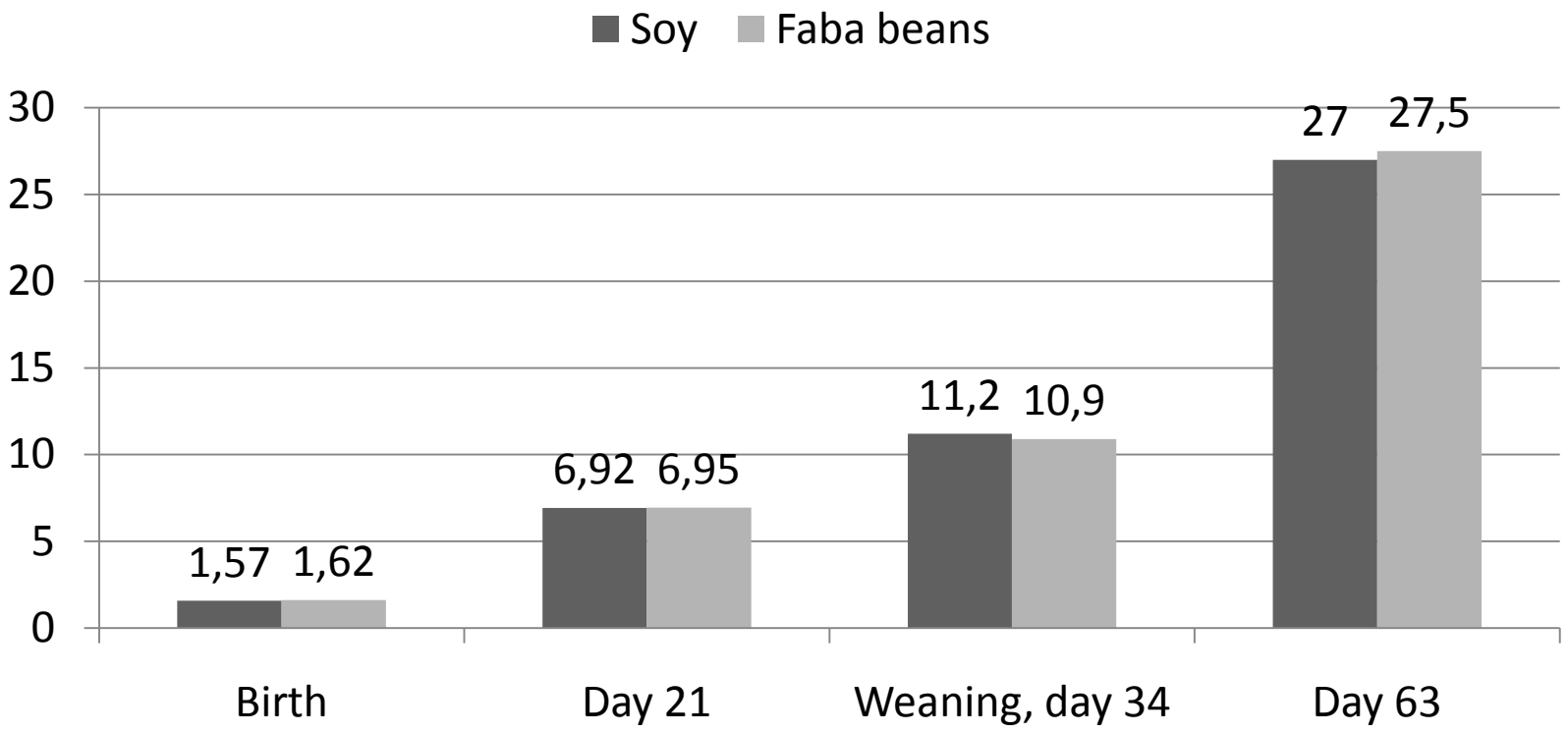
”..and an extra mm”

- Litter size

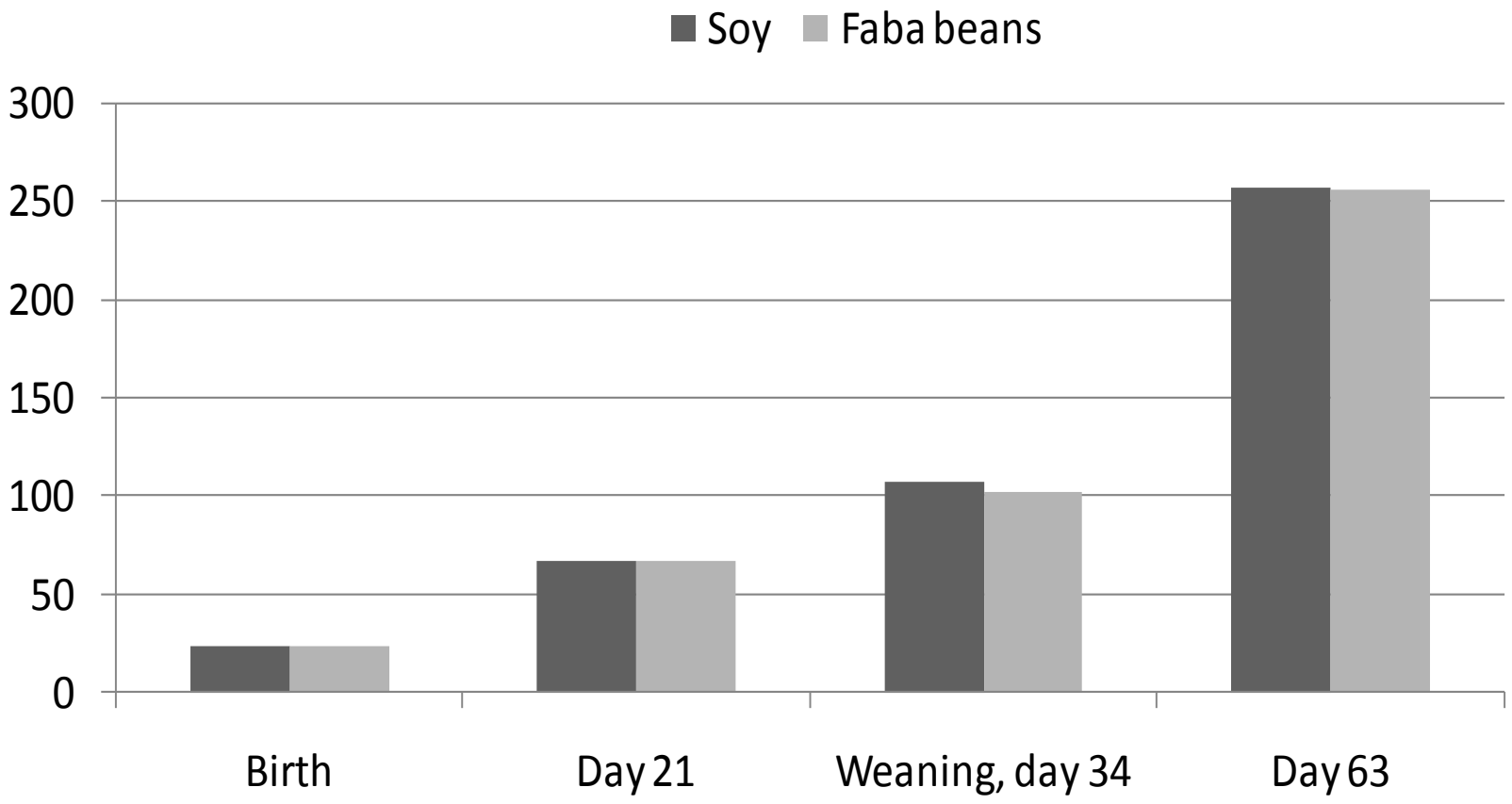
	Soy	Faba beans	Significance
Number of liveborn	14.1	13.8	ns
Number of stillborn	1.19	0.86	ns
Litter size day 21	9.85	9.57	ns
Litter size at weaning (5 weeks)	9.74	9.49	ns
Mortality, %	26.2	27.0	ns

Sow age impact on mortality!

- Piglet live weight



- Litter total weight



Conclusions (?)

- No significant differences though faba beans repeatedly ”second best”
- => white-flowering faba beans in sow diets probably possible , at least in low inclusions.

- High mortality in 1st part of the experiment (both soy and faba bean piglets)

- So far – rather promising, but better wait for data from 2nd part!

- **Thanks for your attention!**

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