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EFFECT OF PROTECTED METHIONINE

PRELIMINARY RESULTS FROM A DKC-TRIAL

Nicolaj I. Nielsen & Martin Øvli Kristensen
Livestock Innovation, SEGES

PRELIMINARY!!



PURPOSE



- Can protected MET increase milk yield and/or milk components ?
- Can protected MET substitute feed protein ?

COWS & DESIGN

- DKC: AMS (DeLaval)
- 36 Jersey cows (18 primi- and 18 multiparous)
- LS-design (3 periods of 3 weeks)
- 3 PMR-diets: STD CP, LOW CP, LOW CP + MET
- Target: 17% CP on STD and 16% CP on LOW
- DK: STD=17,3% CP

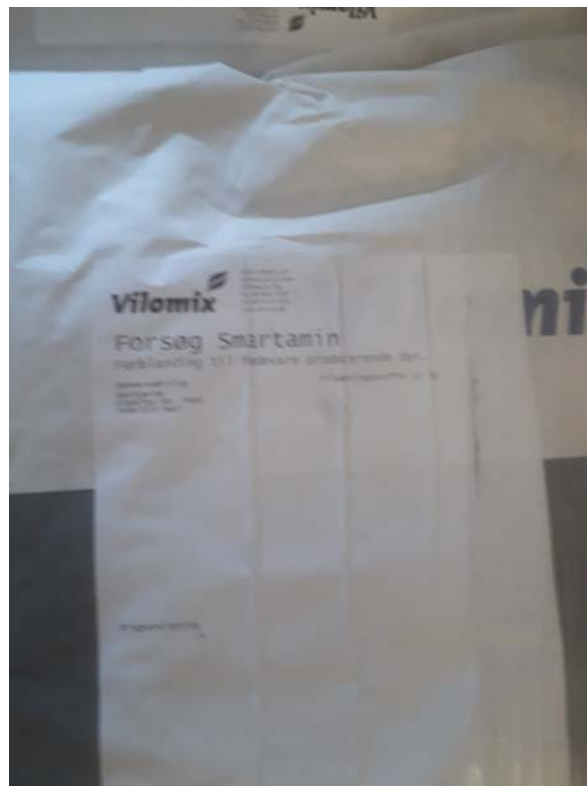
PLANNED DIET COMPOSITION

	Unit	STD CP	LOW CP	LOW CP + Met
Barley	% of DM	13,0	16,6	16,6
Rapeseed cake	% of DM	7,3	7,8	7,8
Soybean meal	% of DM	10,4	6,7	6,7
Grass silage	% of DM	23,4	23,3	23,3
Maize silage	% of DM	31,3	31,1	31,1
Min/vit	% of DM	1,0	1,0	1,0
Smartamine	% of DM	0,0	0,0	0,1
Concentrate_AMS	% of DM	13,5	13,5	13,5
Total	Kg DM	19,2	19,3	19,3

PLANNED NUTRIENTS

	Unit	STD CP	LOW CP	LOW CP + Met
Energy	MJ/day	129,1	129,1	129,2
Crude Protein	g/kg DM	174	160	160
AAT	g/MJ	17,4	16,2	16,3
PBV	g/kg DM	14	7	7
Fatty acids	g/kg DM	25	25	25
Starch	g/kg DM	226	245	245
NDF	g/kg DM	283	284	284
Methionine	g/day	46	44	52
Lysine	g/day	142	134	134
Lys/met ratio		3,1	3,0	2,6
Conc. share	%	54	54	54

SMARTAMINE MIX



SMARTAMINE MIX



TRIAL FACILITY



RESULTS - KPI - NUTRIENTS (% OF DM)

Treatment	DM (%)	CP	Starch	NDF
Low CP	40,2	16,4	21,9	29,3
Low CP + MET	40,0	16,2	21,7	29,5
STD CP	39,7	17,6	19,8	29,7

MILKING FREQUENCY

Treatment	Milking	Visit	Rejection
Low CP	2,3	2,8	0,5
Low CP + MET	2,4	2,9	0,5
STD CP	2,4	2,8	0,4

RESULTS – FEED INTAKE

Treatment	PMR, kg	Concentrate, kg	Total feed intake, kg
Low CP	43,2	2,2	45,5
Low CP + Met	39,9	2,3	42,3
STD CP	42,4	2,3	44,8

RESULTS – MILK YIELD AND COMPOSITION

Treatment	Milk yield, kg	Protein %	Fat %	ECM, kg
Low CP	24,8	4,57	6,57	35,0
Low CP + MET	24,6	4,61	6,61	34,2
STD CP	25,3	4,55	6,55	34,7

RESULTS - CASEIN

- No data from period 3

Treatment	Period		
	1	2	1 and 2
Low CP	3,52	3,82	3,67 / 80,3
Low + MET	3,59	3,74	3,66 / 79,4
STD CP	3,50	3,63	3,57 / 78,5

WHATS NEXT ?

- More data analysis 😊