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Artificially rearing of kids with dairy milk

(Session 18 – Ferdinand.ringdorfer@raumberg-gumpenstein.at)

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Introduction

- **23.200 dairy goats**
- **13.745 t milk**
- **10.151 t for human consumption**
- **Femal kids for breeding**
- **Male kids – problem**
 - Problem with place in the stable
 - Problem with feeding
 - Problem with work
 - Problem with market



Questions?

- Feed the kids with milk from cow
- Feed intake and feed conversion
- Carcass composition
- Economic viability



Material and methods

- 64 male Saanen kids

- 4 groups

 - cow milk warm, 4 times a day (W)

 - cow milk acid (formic acid) cold, ad libitum (C)

 - cow milk diluted 25% water warm, 4 times a day (WD)

 - cow milk diluted 25% water acid cold, ad libitum (CD)

- Final body weight app. 18 kg

- On a farm 2 groups

 - cow milk acid (formic acid) cold, ad libitum (FC)

 - cow milk diluted 25% water acid cold, ad libitum (FCD)



Material and methods

● 4 kids in one pen



Cold acid milk



warm milk 4 times a day



Material and methods

On the farm



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Results of fattening

Traits	W	WD	C	CD	FC	FCD
Number of animals, n	16	16	16	16	8	7
Body weight begin, kg	4,41	3,98	4,49	4,29	4,32	3,79
Final body weight, kg	18,67 ^a	19,08 ^a	18,69 ^a	18,84 ^a	19,17 ^a	21,19 ^b
Fattening periode, d	86 ^a	94 ^a	76 ^a	86 ^a	52 ^b	60 ^b
Total gain, kg	14,26 ^a	15,1 ^a	14,19 ^a	14,55 ^a	16,4 ^b	16,7 ^b
Daily gain, g	173 ^a	164 ^a	195 ^a	173 ^a	284 ^b	290 ^b
Liquid intake, kg/d	1,79 ^a	2,17^{bc}	1,99 ^{ab}	2,44^c	2,19 ^{bc}	3,04^d
Milk conversion, l/kg gain	10,79 ^a	10,14 ^a	10,64 ^a	10,85 ^a	7,92 ^b	7,68 ^b
Liquid conversion, l/kg gain	10,79 ^a	13,52 ^b	10,64 ^a	14,47 ^b	7,92 ^a	10,23 ^a

Results of slaughter

Traits	W	WD	C	CD	FC	FCD
Carcass warm, kg	8,8 ^a	8,9 ^a	9,1 ^a	9,2 ^a	10,7 ^b	10,1 ^b
Carcass cold, kg	8,6 ^a	8,8 ^a	8,8 ^a	9,1 ^a	10,5 ^b	9,9 ^b
Dressing percentage, %	47,5 ^a	47,7 ^a	48,2 ^a	48,5 ^a	53,9^b	52,2^b
Kidney fat, g	217 ^a	261 ^a	314 ^a	266 ^a	522^b	515^b
Muscle portion, %	56,1	55,4	56,1	54,7	55,9	55,2
Fat portion, %	18	19,8	18,4	20	21	19,4
Bone portion, %	25,9 ^b	24,7 ^{ab}	25,5 ^{ab}	25,3 ^{ab}	23 ^a	25,2 ^{ab}
Neck, %	10	9,7	9,4	9,5	9,7	9,4
Neck end, %	6,6	6,4	6,4	6,5	6,3	6,8
Back, %	8	8,3	7,8	8,4	8,1	8,2
Loin, %	6,9	7	6,7	6,9	7,4	7,9
Leg, %	31,9	31,5	32,4	31,6	31,6	32
Breast, %	16,3	17,1	17,1	16,8	16,8	15,8
Shoulder, %	20,2	19,9	20,4	20,3	20,1	19

Economically success – at farm

Gross return: (280,5 kg BW, a' 4,64 €) **1301,52 €**

Effort: **542,42 €**

- milk	1771,5 l, a' 0,38 €	673,17 €
- Formic acid		27,30 €
- Kids	1 € per kid	15,00 €
- hay	100 kg, a' 0,21 €	21,00 €
- straw	120 kg, a' 0,19 €	22,80 €

Contribution margin: **759,10 €**

(50,61 € per kid)

For work (feeding, care) 0,5 hours per day



Conclusion

- Artificially rearing with cow milk is possible
- Cold acid liquid less work
- No difference between the methods
- Hay from begin is important
- Dilute milk – no milk savings
- No effect on carcass traits

Thank you for attention



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