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Feeding of dairy goats and -sheep

Nutrient requirements

Annette Holmenlund,

Advisor in Sheep and Goat consult, teacher at Kaloe Organic Agricultural Colleges

Energy Requirement for dairy sheep and goats

	Goat 60 kg	Sheep 80 kg
Maintainance	1	1,5
per kg ecm	0,4	0,4
Feotus last 7 weeks	0,4	0,5

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Energy correctet milk

$$\frac{0{,}383 * \%\ \text{fat} + 0{,}242 * \%\ \text{protein} + 0{,}7832}{3{,}140}$$

	Fat %	protien %	ECM	FE milk	FE all
Sheep 80 kg 2 kg milk	6,5	5,8	3	1,2	2,7
Goat 60 kg 4 kilo milk	3,5	3	3,6	1,44	2,44

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Goat feeding plan

kg	Feedstuff	FeedUnits	Protein
2,2	Lucernehay Dried	0,8	155
0,5	Wheat	0,9	64
0,42	Sunflower kake	0,4	106
0.33	Maize grains	0,4	18
		2,5	343

20 grams of minerals per day , The plan has 2,8 kg DM

Feeding capacity of drymatter in dairy goats

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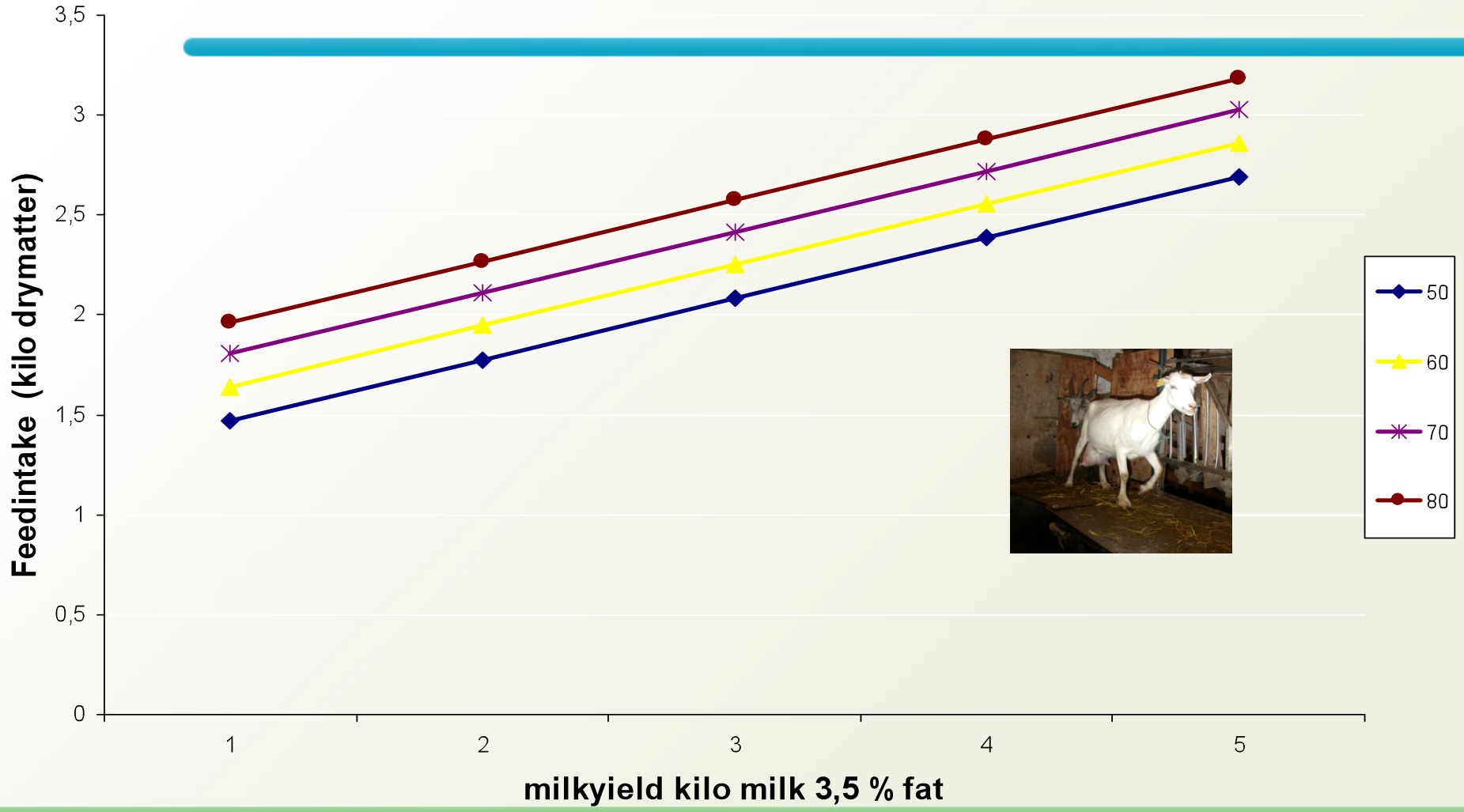
Feed intake of dairygoats (kilo drymatter)



Feeding intake capacity

- Depends on yield and weight of the animal
- Depends on cutting the fodder into pieces
- Depends on the optimal rumination
- That is: how much time will it take the fodder to be degraded in the rumen to produce microbes which are passing to the intestine

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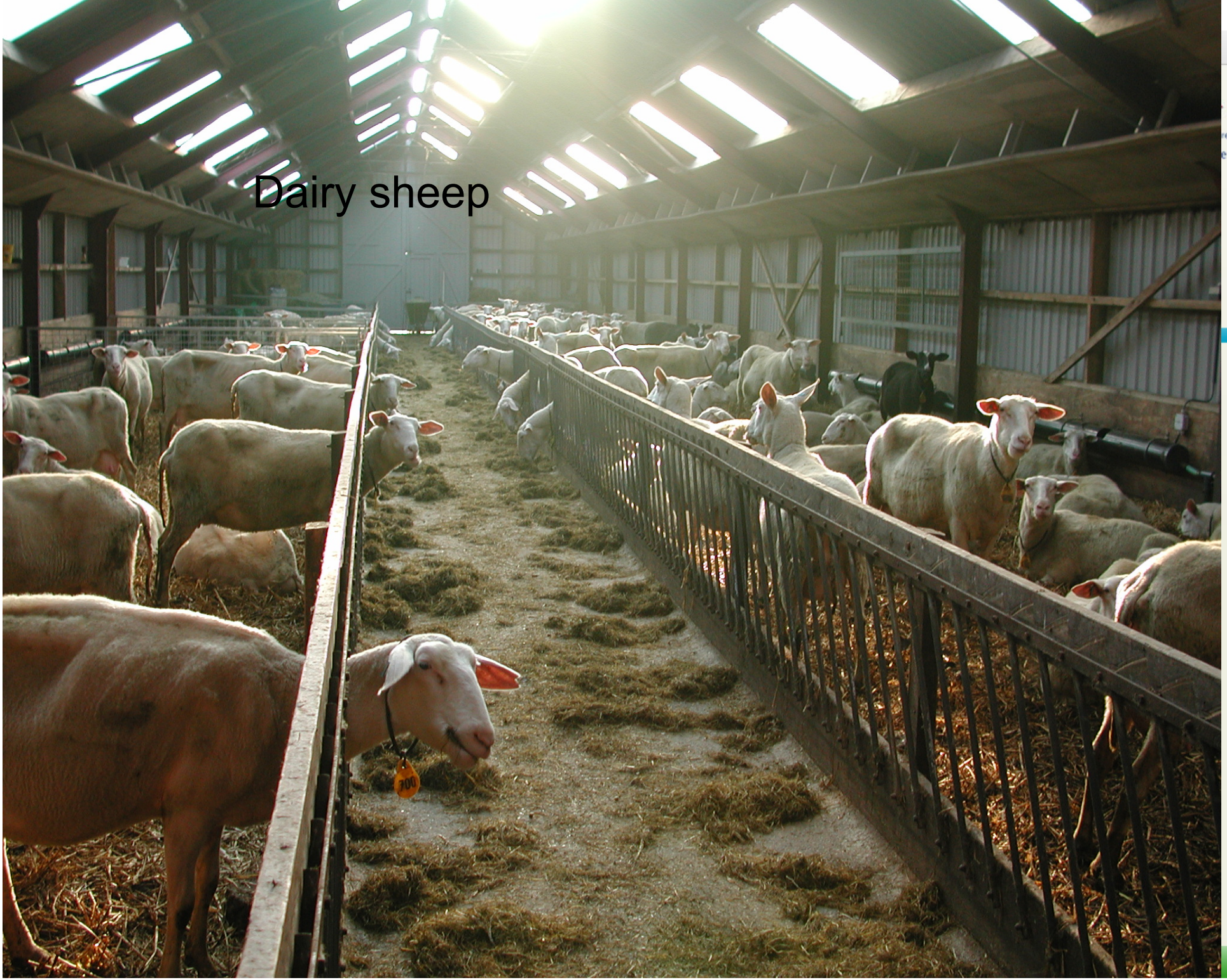
High energy and protein Roughage makes milk


Dairy sheep

Drymatter intake in sheep

a 80 kilo milk sheep,

2 kilo milk

6,5 % fat

5,8 % protein

can eat 3,25 kilo drymatter

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A balanced Rumen makes Milk

Sheep and Goat has a limited feed intake capacity but

- **The right concentrate which corresponds to the green fodder does not fill in the rumen.**
- **The right combination will stimulate metabolism in the rumen.**

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Make a balanced feeding plan

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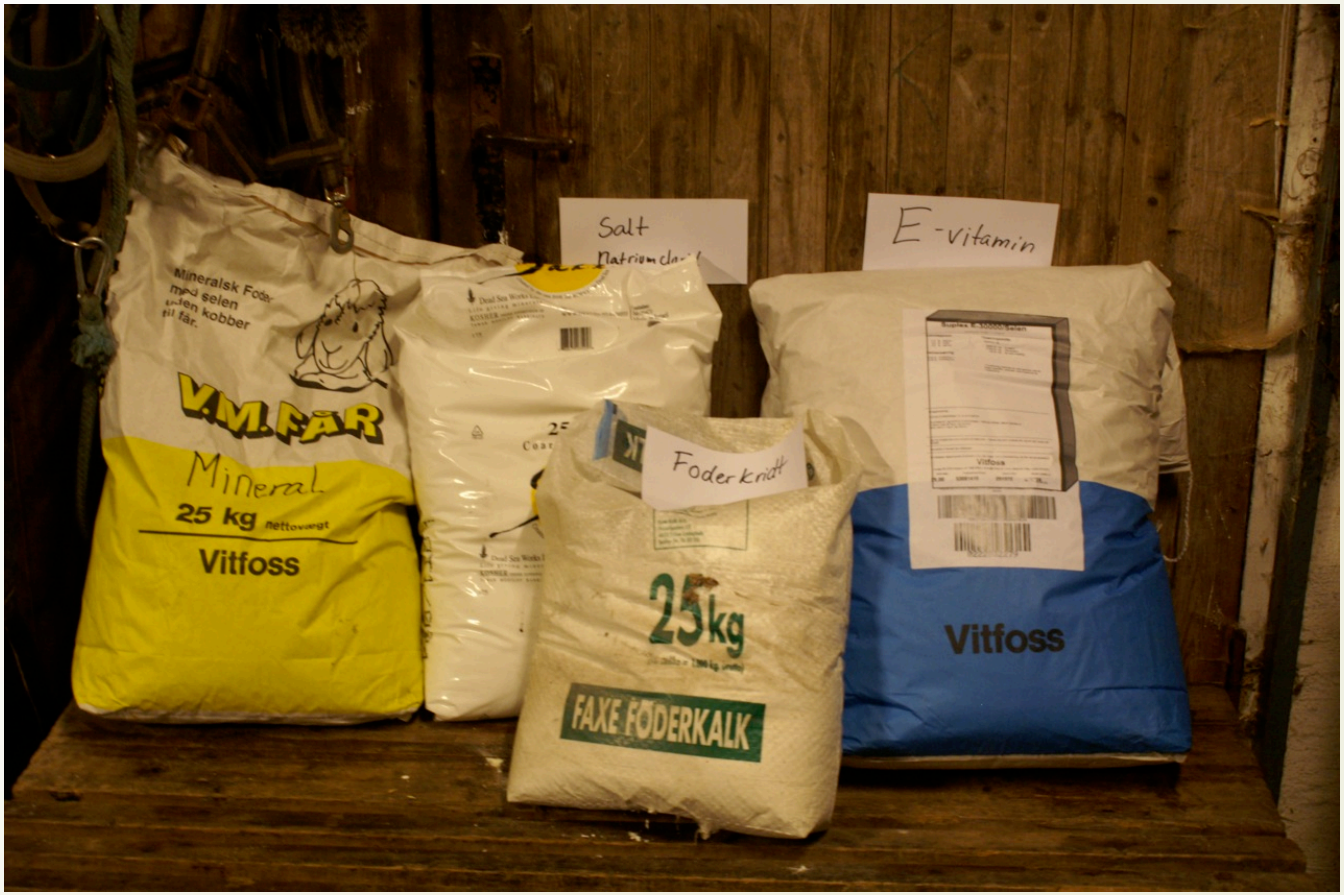
Remember minerals



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In Denmark we use whole grain to avoid acidosis

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Total Mixed Rations makes better rumen conditions.

Protein for dairy sheep and goats

- **Ca. 130 g digestible crude protein pr. FE**
- **AAT 90-100 g pr. FE**
- **PBV 15-35 g pr. FE**
- **Maintainance 90 g digestible crude pr. FE**

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(Aminoacids Absorbed in the small inTestine)=AAT

- Is higher in hay than in fresh grass
- Is lower in silage than fresh grass
- Is high in straw but no real value
- Is high i maize an in barley and wheat
- The most important amount of AAT is created in the rumen

PBV = protein balance in the rumen

- **Clovergrass, Peas, lupins, soybean- sunflower- and rapemeal has high PBV which means fast degration of protein in the rumen.**
- **Starch from barley wheat and especially maize is really good to catch the released aminoacids from protein degration. These feeds are good together**
- **Maize has really low PBV which can neutralize the high PBV in clovergrass**

Grass

Never red clover it destroys fertility

Use lucerne or clover to collect nitrogen

Cut the grass in early states

Make lots of cuts to ensure a good digestibility

Prevent parasites in grazed grass.

Contents of AAT and PBV in feeds

Feedstuff	AAT/FEg	PBV/FEg	dig. crewprot pr. FE, g
soymeal	108	154	311
rapeseedmeal 10% fat protected	132	96	246
Barley	87	÷47	66
Wheat	84	÷10	89
Maize	108	-93	44
Sun flower kake	114	158	256
Clovergrassilage, mid. digestible.	83	47	151
Cloverhay, highdigestibility.	109	÷10	130
Grasspellets standard	123	32	174
lucerne hay	114	85	198

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Ensure good raw materials to the ”protein factory”

- **AAT**
  - **Minimum 90 in ”good green feedingplans containing lots of grass**
- **PBV**
  - **Minimum 0 og maksimum 30**
- **Maximum, 1,2 kilo dry matter in pregnancy**
- **Maximum 2,5-3,5 kilo dry matter in lactation depending on milk yield**

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Minerals to dairy goats

Mineral	Min. percent of drymatter
Calcium	0,6%
Phosphor	0,3%
Magnesium	0,18%

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Minerals to sheep andgoats

Micromineral	Mg pr. kg dm. min.	Mg pr. kg dm. maks.
Zink	33	750
Cobolt	0,2	10
Selenium	0,15	2
Iodine	0,8	50
Manganese	20	1.000
Copper	7-10	15
N/S	Relation 7	Relation 10

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Vitamins to dairy goats

Vitamin	Unit
A-vitamin	**5000 i units**
D-vitamin	**400 i units**
E-vitamin	**30 mg pr. day** **90 mg pr. day in late pregnancy** Vitamincontent is good in grass based rations

Make good feedingplans

Ensure:

Energy requirement

Protein requirement

Do not exceed feeding capacity

AAT at 90

PBV at 0-30

Remember limestone and minerals

Vitamin content is good in grass based rations

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Thank you

Sign in at www.sheepskills.eu to learn more.

Chanakkale Univercity works with goats and sheep

urartular@gmail.com Dr. kemal Celik is in charge of the project

for the Turkish partners but also Professor Ergun

dr. ergun ergun@balikesir.edu.tr