Goats Nutrition

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4 key factors for technical and economic success in dairy goats

Main factors which affect productive result (milk quantity) in goat breeding and their relative weight (source: French goats farms network of CCPA Group)
For each category of animals exists nutrition indicators for an instant (obtained performance) and long term (rumen function) success:

1. The percentage of renewal: average 25% (recent studies in France indicate 30-50% of renewal and 25% of first lactations does not reach the 300 DIM !!!!).

2. The qualitative growth of young goats: weights to the typical age, but also size (chest circumference) and body condition score (BCS).

3. The successful reproduction (NM and AI) of the different categories of animals (goats, first lactations, adult): fertility by ultrasound and at birth, the concentration of the births according to the objectives of the breeder.

4. Obtaining the production performance desired: milk quantity (peak, persistence, per lactation, per career) and quality (% fat and protein).

5. The positive evolution in the lactation of indirect indicators of energy / protein balance: Body Condition Score (BCS) and Urea in milk.

6. The compliance with the parameters of well-being and longevity of the rumen: forage / concentrates ratio, long fiber available, variation fodder waste, number forages and concentrates meals, quantity concentrated / meal, herd behavior, changes in the quantity (and quality (inversion) of milk, rationing parameters (NDF, ADF, Raw Fiber, Starches thresholds), feces consistency.
YOUNG GOATS: different stages of growth

Target: first reproduction at 7 - 8 months of age => first birth at 12 – 13 months of age
**YOUNG GOATS: the importance of growth**

**Target**: good growth (young goats) for an early reproduction and more milk (adult goats)

**Source**: PEP Caprin – Station Caprine du Pradel - Auvergne Rhone Alpes
YOUNG GOATS: the importance of growth

**Check the live weight:** at typical moments and relativize it to the size of the goat breed

<table>
<thead>
<tr>
<th>Stadium</th>
<th>Birth</th>
<th>Weaning</th>
<th>Postweaning</th>
<th>Mating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (months)</td>
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<td>2</td>
<td>4</td>
<td>7</td>
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<tr>
<td>Live Weight (LW) Kg</td>
<td>3</td>
<td>13</td>
<td>20</td>
<td>28</td>
</tr>
<tr>
<td>% (LW/AW)</td>
<td>6%</td>
<td>25%</td>
<td>40%</td>
<td>55%</td>
</tr>
<tr>
<td>Adult Weight (AW) Kg</td>
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<td>Live Weight (LW) Kg</td>
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<td>33</td>
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<tr>
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<td>18</td>
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<tr>
<td>Adult Weight (AW) Kg</td>
<td></td>
<td></td>
<td></td>
<td>70</td>
</tr>
</tbody>
</table>

Source: PEP Caprin – Station Caprine du Pradel - Auvergne Rhone Alpes

Local breed (Massif Central)

Alpine breed

Saanen breed
YOUNG GOATS: example of feeding program (to assure good growth)

Source: young goats nutrition plan ALICOOP – BONILAIT
YOUNG GOATS: the importance of colostrum

Colostrum of a good quantity and quality: best natural vaccination (immunoglobulin)!

1. Good quality: checked with a refractometer (> 24 ° brix)
2. Correct quantity: 100 grams every 1 kg of body weight
3. Milked on time: within 2 hours (after it loose immune power)
4. Administered on time: within 2 hours after birth (after stomach became waterproof)
YOUNG GOATS: milking period

4 options:

1. Under the mother
2. Gutter
3. Multiteats bucket
4. Feeding machine

<table>
<thead>
<tr>
<th>Image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image 1" /></td>
<td>Young goats milking under the mother</td>
</tr>
<tr>
<td><img src="image2.png" alt="Image 2" /></td>
<td>Gutter for milk collection</td>
</tr>
<tr>
<td><img src="image3.png" alt="Image 3" /></td>
<td>Multiteats bucket for milk collection</td>
</tr>
<tr>
<td><img src="image4.png" alt="Image 4" /></td>
<td>Feeding machine for milk collection</td>
</tr>
</tbody>
</table>

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YES

NO
YOUNG GOATS: how to reduce the weaning stress

Solid food and clean water at will until first week of age during milking period

- Rationade Milk
  - Gradual Weaning
  - Intake (g DM)
  - Milk
  - Hay + Concentrate
  - Weeks

- At will Milk
  - Drastic Weaning
  - Milk
  - Hay + Concentrate
  - H. + C.
  - Weeks
Target: high quality fodder during critical period (after weaning, end of pregnancy)
ADULT GOATS: different stages of management

Target: lactation 10 months, reproduction 7th month of lactation, dry period 2 months

One year of the adult goat
ADULT GOATS: evolution of needs

Why TRANSITION is a critic point: DMI decrease when foetal needs became very important

Source: L'alimentation pratique des chèvres laitières - IDELE
ADULT GOATS: Body Condition Score (BCS)

Lumbar zone

Sternal zone
ADULT GOATS: example of feeding program (CORN SILAGE)

Target Goat: body weight 70 kg - production 1100 kg milk/goat/year – 3.60 % Fat & 3.40 % Protein
ADULT GOATS: example of feeding program (HOLLOW HAY SILAGE)

**Target Goat:** body weight 70 kg - production 1100 kg milk/goat/year – 3.60 % Fat & 3.40 % Protein
ADULT GOATS: example of feeding program (ALFA ALFA HAY)

**Target Goat:** body weight 70 kg - production 1100 kg milk/goat/year – 3,60 % Fat & 3,40 % Protein
ADULT GOATS: example of feeding program (GRASSES HAY with HOUSED GOATS)

Target Goat: body weight 70 kg - production 1100 kg milk/goat/year – 3,60 % Fat & 3,40 % Protein
ADULT GOATS: example of feeding program (GRASSES HAY with GRAZING GOATS)

**Target Goat:** body weight 70 kg - production 1100 kg milk/goat/year – 3,60 % Fat & 3,40 % Protein

With "just" 5 month of grazing I can save 200 kg hay/goat/year

Source: L'alimentation pratique des chèvres laitières - IDELE
Thank you so much!