GROWTH OF WEST AFRICAN SHEEP WEANED AT TWO DIFFERENT AGES

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This study was made to investigate the effect on growth of weaning West African sheep at 56 or 84 days old, which were fed with hay and concentrate to appetite. The liveweight gains obtained to 20 weeks were 93 ± 15 g/d and were not affected by the age of weaning.

Key words: Tropical sheep, weaning age, lamb growth

Milk production in tropical sheep is poor and rapidly drops after lambing (Butterworth 1968; Combellas 1974; Rondon et al 1976). The poor milk production means that the lamb must consume other feedstuffs within a few weeks of birth. Early weaning means that parasite contamination of the lamb can be reduced, the ewe is able to conceive earlier and flock management is eased, however the health and normal growth of the lamb must not be compromised.

In temperate breeds of sheep, lambs weaned between 42 and 126 days have grown only slightly less rapidly than those weaned in the normal manner (Hinds et al 1960; Lewis et al 1960; Pretorius 1966; Yalcin et al 1969; Bhat et al 1978). There is, however, little information on the performance of tropical breeds. In sheep of the Tabasco breed from Mexico, Castillo et al (1973) have shown that the best weaning age is between 75 and 90 days of age.

This present trial was undertaken to compare the effect of two ages of weaning on the growth after weaning of lambs of the West African breed.

Materials and Methods

Fifty adult sheep of the West African breed which lambed single offspring were used. The sheep grazed Bermuda grass (Cynodon dactylon) supplemented with minerals throughout gestation until two weeks before lambing when they were confined with hay of Cenchrus ciliaris with 0.5 kg/d of concentrate containing 20% crude protein until weaning their lambs. When they were confined the animals were deparasitized with Thibenzoline and vaccinated with Sintomix against blackleg, malignant oedema and hemorragic septicaemia. After lambing the animals were weighed and put with their lambs in individual pens for two weeks. Following this the animals were moved to partly roofed pens, were weighed weekly until weaning and deparasitized monthly with Neguvon.

The sheep were allocated at random to two groups. The first group of lambs was weaned at 56 days and the second at 84 days old. From the third week of age the lambs had access to a creep feed (Table 1) and the same hay as their dams.
At weaning the lambs were restrained in partly roofed pens and fed with *Cenchrus ciliaris* hay and starter concentrate (Table 1) to appetite, until 20 weeks old. Lambs were weighed at weaning and weekly until the end of the trial.

**Table 1:**

Chemical composition of starter concentrate mix

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>Dry matter (%)</td>
<td>94.1</td>
</tr>
<tr>
<td>Crude protein (%)</td>
<td>29</td>
</tr>
<tr>
<td>Crude fibre (%)</td>
<td>4.6</td>
</tr>
<tr>
<td>Crude fat (%)</td>
<td>4.1</td>
</tr>
<tr>
<td>Ash (%)</td>
<td>14.4</td>
</tr>
<tr>
<td>N F E (%)</td>
<td>47.9</td>
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</tbody>
</table>

Materials used: 41% sesame meal; 35% maize residues; 10% meat meal; 5% wheat bran; 5% minerals; 4% milk powder.

**Results and Discussion**

There were no significant differences between lambs weaned at 56 and 84 days for weight at birth, 8, 12 or 20 weeks of age (Table 2). Similar results were obtained by Yalcin et al (1969) in which no differences were obtained between temperate lambs weaned at 60 or 75 days of age. The work of Pretorius (1966), weaning of lambs at 56, 112 and 168 days, found reduced growth in the lambs weaned at 56 days but only for the first two weeks after weaning. In the current work weaning weight was lower at 56 days but there was a quick recovery to similar weights by 20 weeks (Figure 1). The similarity of weight gains between the group weaned at 56 and 84 days could be attributed to the low milk production which has been seen in this breed from the 8th week of lactation (Combellas 1980).

**Table 2:**

Lamb weight (kg) at birth and at 8, 12 & 20 weeks of age

<table>
<thead>
<tr>
<th>Age at weaning</th>
<th>Birthweight</th>
<th>8</th>
<th>12</th>
<th>20</th>
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</thead>
<tbody>
<tr>
<td>56 days</td>
<td>2.8</td>
<td>10.5</td>
<td>12.0</td>
<td>15.8</td>
</tr>
<tr>
<td>84 days</td>
<td>2.8</td>
<td>9.5</td>
<td>12.4</td>
<td>15.8</td>
</tr>
<tr>
<td>SE&lt;sub&gt;x&lt;/sub&gt;</td>
<td>0.15 NS</td>
<td>0.48 NS</td>
<td>0.55 NS</td>
<td>0.64 NS</td>
</tr>
</tbody>
</table>

Daily weight gain 93±15 g from birth to 20 weeks old.
The absence of negative effects of weaning at 8 weeks of age is advantageous in that the lactational anoestrous reported by some workers could be reduced (Mauleon and Danzier 1965; Morag and Eyal 1971) and the risk of parasite contamination of the lambs is also lessened.

References

Butterworth M H and Blore T W D 1968 The lactation of Persian Black Head ewes and the growth of lambs The effect of three different nutritional regimes during gestation on subsequent growth Journal of Agricultural Science Cambridge 73: 133-142
Castillo R N, Ponce H R y Berruecos J M 1973 Caracteristicas de crecimiento del corde ro Tabasco I Efecto de la edad y peso al destete y su influencia sobre la fertilidad de la madre Tecnica Pecuaria pp: 28-32
Combellas J B 1974 Alimentacion de corderos antes del destete Universidad Central de Venezuela Facultad de Agronomia Trabajo de escalafon
Lewis J M, Mansfield M E & Hinds F C 1960 Systems of managing ewes and lambs to increase spring lamb production and to control parasites Journal of Animal Science
Mauleon P et L Dauzier 1965 Variations de duree de l'au oestrus de lactation chez les brevis de race Ile de France Ann Biol Anim Bioch Biophys 5: 131-1bl
Rondon Z, Combellas J B y Parra R 1976 Produccion de leche en ovejas con tres niveles de alimentacion IV Seminario de Ovinos y Caprinos Coro Venezuela
Yalcin B C, Actas G & Sandikciogen M 1969 Effect of weaning at different ages on growth of lambs and milk production of dams in Awassi breed of sheep Journal of Agricultural Science Cambridge 74: 45-55

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