WILLOW (SALIX SPP.) AS A DROUGHT FEED FOR SHEEP

P.R. DANN* and A. AXELESEN+

During severe drought willows along watercourses continue to produce abundant foliage which has potential for feeding animals. In the summer of 1982-83 we assessed the value of this foliage as a drought feed for sheep. The trial commenced on Ginninderra Experiment Station on 10 January 1983 and continued for 6 weeks. Four Merino hoggets and four crossbred lambs (mean live weights 31.3 and 23.0 kg respectively) were fed a sole diet of willow leaves, and twigs up to about 3 mm diameter, obtained by the daily lopping of willow trees (planted in 1971), and 2.5 kg was fed to each sheep daily, so that mean intake was 0.94 kg DM. Typical analyses of the diet were: 16.2% protein, 65.8% I.V. digestibility and 37.7% dry matter.

The mean gains of hoggets and lambs were 1.9 and 1.8 kg respectively over 6 weeks. No apparent ill-effect of the sole willow diet on the animals was observed.

The total leaf and fine stem from an average 12-year old willow tree, some 15 m tall, was about 200 kg. Our results show this would be a more than adequate maintenance ration for 80 sheep days. The lopped trees recovered well and could be harvested again several years later.

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INFLUENCE OF SHADE ON MILK PRODUCTION OF FRIESIAN COWS IN A TROPICAL UPLAND ENVIRONMENT

T.M. DAVISON* and B.A. SILVER*

Sixteen Friesian cows in early lactation were split into two groups receiving either tree shade or no shade. The experiment went for 8 weeks during summer 1985. It aimed to determine the effects of tree shade on milk production, liveweight change and rectal temperature measured at 2p.m. each day. Cows grazed high quality tropical grass-legume pastures.

Table 1 Milk yield, liveweight change and rectal temperature of cows with or without shade

<table>
<thead>
<tr>
<th>Variable</th>
<th>Shade</th>
<th>No Shade</th>
<th>LSD (p = 0.05)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk yield (kg/cow/d)</td>
<td>17.8</td>
<td>16.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Liveweight change week 1 to 8 (kg)</td>
<td>-18</td>
<td>-27</td>
<td>22</td>
</tr>
<tr>
<td>Rectal temperature (O C) (range)</td>
<td>39.4</td>
<td>40.0</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Shade significantly increased milk yield (p<0.01) and decreased rectal temperature (p<0.01). It was concluded that provision of shade was essential to achieve high milk yields in this environment.

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