21. ROLE OF UNIVERSITY RESEARCH FARM, TANUVAS IN PRODUCTION AND PROMOTION OF FODDER

During 1960, Government Dairy Farm and Cattle Colony at Madhavaram were setup with the hope that the cattle colony will serve as the basis for shifting of city animals and as a model farm and with an object of supply of milk to the public in the city. The milk colony consists of Eight units for housing the animals with a total capacity of 4,000 animals. But due to various problems of diseased animals and supply of lesser quantity of milk to the Central Dairy of the Tamil Nadu Dairy Development Corporation, the Government transferred the Dairy Farm and Cattle Colony to the control of Animal Husbandry Department on 01.07.1979(Vide G.O.No. 669, Agriculture (MP.II), Dept. Dated: 31.03.1979.

The Government Dairy Farm of Animal Husbandry Department was taken possession by the Tamil Nadu Veterinary and Animal Sciences University on 01.03.1991 (Vide G.O.No. 44, AH & F ( AH6), Dept. Dated: 04.02.1991). Out of the 8 units which were taken possession by the University, 5 Units were utilized for the establishment of various Laboratories / Offices of University and in the 4th and 8th Units Licensees were maintaining animals. The Government Dairy Farm which was functioning at 6th Unit was renamed by TANUVAS as "UNIVERSITY RESEARCH FARM".

UNIVERSITY RESEARCH FARM LAYOUT
It is maintaining Livestock farm and poultry complex which hosts dairy cattle, sheep, goat, rabbit, pig and Animal Science Park for the benefit of UG and PG students of Madras Veterinary College, farmers and entrepreneurs. Perennial fodder is grown with an output of over 6 MT daily. URF is a good source of outlet for selling green fodder based on weight to the farming community who are rearing the dairy cattle in and around Thiruvallur and Kancheepuram districts. Moreover farmers and entrepreneurs are also provided training on various farm waste management, skill development programmes on fodder cultivation, dairy farming and farm waste utilization, animal husbandry advisories and farm demonstrations.

Fodder unit is spread over in 30 acres of land on the eastern side of the Madhavaram Lake. The lake supplied water for irrigation nearly 8 months per annum.

<table>
<thead>
<tr>
<th>Fodder Type</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co3 and Co4 fodder</td>
<td>22</td>
</tr>
<tr>
<td>CoFS29</td>
<td>3</td>
</tr>
<tr>
<td>Desmanthus</td>
<td>1</td>
</tr>
<tr>
<td>Stylo</td>
<td></td>
</tr>
<tr>
<td>Moringa</td>
<td></td>
</tr>
<tr>
<td>Malbery</td>
<td></td>
</tr>
<tr>
<td>Silvi pasture</td>
<td>2</td>
</tr>
<tr>
<td>Palmyrah trees</td>
<td>2</td>
</tr>
</tbody>
</table>

Other farm activities

1. Dung well irrigation along with lake / bore well
2. Establishment of model plots
3. Establishment of farm waste management includes
   a. Vermicompost
   b. Azolla production
   c. Bio gas production
4. Established organic vegetable garden
5. Teak tree planting

Cultivation practices of Cumbu Napier hybrid grass

1. Preparation of field
   Plough with an iron plough two to three times to obtain good tith.

2. Application of FYM
   Apply and spread 25 T/FYM/ha of or compost every year on the unploughed field and incorporate the manure in the soil during ploughing.

3. Forming Ridges
   Form ridges and furrows using a ridger, 6 m long and 50 cm apart and form irrigation channels across furrows.
4. Application of Fertilizers
   i. Apply NPK fertilizers as per soil test recommendations as far as possible. If soil testing is not done, follow the blanket recommendations of 150 : 50 : 40 of kg NPK/ha.
   ii. Apply full dose of NPK, basally before planting by opening furrow 5 cm deep on the side of the ridges and cover with soil.
   iii. Application of Azospirillum and Phosphobacterium along with 75% of recommended dose of N and P fertilizers enhanced the yield besides saving of 25% of fertilizer dose.

5. Planting
   i. Irrigate through the furrows and plant one rooted slip/stem cutting per hole and at a depth of 3 to 5 cm on the side of the ridge, half the distance from the top of the ridge and the bottom
   ii. Maintain a spacing of 50 cm in the row in the ridges which are 50 cm apart
      Seed rate: Hybrid Napier grass does not produce seeds and hence propagation is by means of rooted slips. 40,000 slips are required to plant one ha.
   iii. As a mixed crop, 3 rows of Cumbu Napier Hybrid and one row of Desmanthus can be raised to increase the nutrient value.

6. Water Management
   Immediately after planting, give life irrigation on the third day and thereafter once in 10 days. Sewage or waste water can also be used for irrigation.

7. Weed Management
   Hand weeding is done whenever necessary.

8. Harvesting
   First harvest is to be done on 75 to 80 days after planting and subsequent harvests at intervals of 45 days.

9. Top Dressing
   After each harvest apply 100 kg N/ha (wherever Nitrate problem is more reduce the N application)
   Note: 1. Quartering has to be done every year or whenever the clumps become unwieldy and large (each clump will form into big stools in two years. It is then split into four quarters and three of them are removed. This operation is known as quartering.
   2. Wherever necessary to countermand the ill effects of oxalates in this grass, the following steps are suggested
      i. Feeding 5 kg of leguminous fodder per day per animal along with these grasses or
      ii. Providing calcium, bone meal or mineral mixture to the animal or
      iii. Giving daily half a litre of supernatant clear lime water along with the drinking water or sprinkling this water on the feed to be given.
   3. Cumbu - Napier grass can be intercropped with Velimasal at 3:1 ratio harvested together and fed to animals.

At URF, Cumbu Napier hybrid grass is irrigated with dung well water. Dung washings from the animal shed are transported to the dung well with water and that mixed with lake/bore well water is used for irrigating the field.

_Fodder Cultivation Technologies_
Land preparation and planting of Cumbu Napier hybrid grass and Desmanthus
Fodder Crops at University Research Farm

Dung Well Irrigation

Fodder Cultivation Technologies