Community Rearing System of Pulikulam Cattle: A Case Study in Tamil Nadu, India

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India takes a pride of possessing the finest breeds of draught animals. In India, draught cattle play a fundamental and pivotal role in livelihood improvement as they provide farm power and contribute to food security, poverty reduction, income generation and to some extent gender equity. Traditionally, these animals are also being utilized in bull fighting I bull baiting game as a sign of braveness named ‘Jallikattu’ or ‘Eru Thazhwuthal’. The draught animal population seemed to decline continuously in India as well as in the state of Tamil Nadu due to many reasons like agricultural mechanization, reduction in grazing land, migration, land encroachment, cattle sent for slaughter, etc. Of the many indigenous breeds of draught cattle reared in Tamil Nadu, Pulikulam is the breed maintained by community rearing system and an attempt was made to explore the management practices followed in Pulikulam cattle rearing. Pulikulam breed is also known as Jallikattu breed in local language. They are also known as Kilakad or Kilakkadu. This breed is found in Madurai, Sivanganagar, Virudhunagar and Theni districts of South Tamil Nadu. The breed is very compact with stout legs and hard feet. They have very powerful loins, shoulders, neck and capable of doing very hard work. This breed of cattle is comparatively small in size, but is very active and capable of much endurance. In the villages of South Madurai the small bulls are kept for the purpose of bull fighting or rather bull baiting and were known as “Jallikattu” reported that this breed received National Bureau of Animal Genetic Resources (NBAGR), Kamal, Haryana, recognized ‘Pulikulam’ as 35th registered indigenous cattle breed in the country. As per a survey, the population of Pulikulam cattle in and around Madurai has drastically come down from 90,000 in the year 1995 to 45,000 in 2006 to 21,225 in 2012 (Mallady. 2013).

Methodology
The case study was conducted through discussion among 25 Pulikulam cattle rearers located at Vadapazhanji village, Madurai district of Tamil Nadu. The data was collected by using a semi-structured open ended interview schedule. The collected details were cross-checked with local veterinarian and village leader to assess the data validity. The present study was also crosschecked with the previous study conducted by Vivekanandan and Alagumalai (2013).

Discussion
Pulikulam cattle rearers maintain their own animals and I or the animals of other people on rental basis in the village under study. The age of the Pulikulam cattle rearers ranged from 20 to 65 years. Usually men are involved in grazing and marketing activity and women involved in cleaning the animal shed (patties). People from Yadava I Konar community were involved in rearing Pulikulam cattle. The education level of the rearers varied from illiterates to degree holders. The average monthly income earned was of Rs. 3000 per month with the increment of Rs.200 per annum. For those who engaged in watching the animals during the night, Rs.20 per day along with food, tobacco and beedi (localized Cigar) were provided. Apart from the above income, the rearers earned Rs. 500 - 1000 for dung which were sold once in 15 days. As a whole, the rearers could earn about Rs. 60000 per annum.

The herd size ranged from 25 to 200 which included only the adult animal and not

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Table I. Expectations I need of Pulikulam cattle rearers

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Expectations/ Needs</th>
<th>Frequency of expression by the respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Permission for animal grazing in the forest land</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Creation and reclamation of water resources in and around the village</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>(80.00)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Waste land development programme is to be implemented for grazing in the hilly and poramboke land</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>(72.00)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Incentives for conservation of indigenous germplasm</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(52.00)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Breed recognition and conservation</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(44.00)</td>
<td></td>
</tr>
</tbody>
</table>

Multiple responses not to total
Figures in parentheses indicated percentages to total

calves. Animals were maintained in a open barren Poramboke land (community land) bounded with nets made from locally available materials (Patties). The animals were exposed to rain or any other adverse climate. The animals were maintained at night in the patties and dung were collected in the morning and gathered as heaps. Then they were dried, broken and sold as fuel material. One small kutcha house (temporary), which is located adjacent to animal patties, where the watchmen stay and look after the animals during night time to avoid thefts. Communal grazing was practiced. The animals were taken as herd to adjacent hills and forest area. Concentrate feeding was not at all fed. The rearers expressed that during the time of cultivation, the village people objected animal grazing and they found it very difficult to identify grazing land. They also expressed that forest officials were not allowing animal grazing in the forest land. Upto 6 months of age, calves were not taken for grazing, but later they were mingled with the adult animals. No watering trough was kept in patties. The animals were taken to nearby ponds during the time of grazing. During summer, they found very difficult to water their animals.

Animals were bred naturally among themselves. Normally four males were kept for 100 females leading to the sex ratio of 1:25. Additional males were usually culled and marketed for proper maintenance of the herd. The rearers did not have the practice of observing oestrus signs. The animals in heat bred with the males available in the herd. Animals were not tied with nose rope, which made it difficult to handle and to control the animals. For identification of one herd group with the other, they tied rope or bead in the neck of the animals. At times of illness they never called veterinarians for treating their animals. If health situation of animals go worst, the rearers would meet the veterinarians to collect medicine for oral administration or topical application. Vaccination and deworming were not practiced.

Mortality rate in the herd was observed to be 5 per cent per annum. If the animals were found dead, the rearers immediately informed the owners to avoid quarrel. Certain indigenous myths were being followed viz., If the animals didn’t take any feed I go graze, they used to scrape the tongue of the animal with knife and scrubbed with sand. If the animals were bitten by the snake, they used to cut the ear of animal to collect blood. The blood drops thus collected will be poured in the eyes of the animals. Pulikulam animals were used for ‘bull baiting’ or ‘Jallikattu’, ploughing and for meat purpose.
Animals were sold at the age of 7 months to get trained for 'bull baiting' and 'Jallikkattu'. The marketing is done through intermediaries. The expectations I need as expressed by the Pulikulam cattle rearers are mentioned in Table I.

Keeping in view of declining population of 'Pulikulam' cattle, steps need to be initiated for conservation of the existing population. Better Management Practices need to be followed by selecting animal for their economic traits and breeding them to improve genetic potential of the breed. Listing of all animals, record maintenance, health cover, improving knowledge on better rearing practices need to be done. Access to credit from financial institutions, sustainable market for the animals and produce are to be improved. Improvement in grazing land and wasteland by way of fodder production is required to meet the demand during cultivation time. Steps are to be initiated for proper valuation of animals and to reduce exploitation by middlemen.

References

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Birth Centenary Celebrations of Dr. V.Panduranga Rao

On the eve of 100th birth celebrations of Dr. V.Panduranga Rao, Founder Head of the Department of Veterinary Anatomy, College of Veterinary Science, Tirupati, the Teacher’s Association, Alumni Association and Retired Teachers of College of Veterinary Science, Tirupati celebrated the Birth Centenary Celebrations of Dr. V. Panduranga Rao on 19-9-2015 at CVSC, Tirupati in a grand manner. He worked as reader and Head of the Department of Veterinary Anatomy from 15-7-1955 till his retirement i.e., September, 1976. He completed 99 years and entered into 100th year on 19-9-2015. At the age of reaching 100 years Dr. V.Panduranga Rao is still active and healthy.

Dr. V.Panduranga Rao was the chief guest of the function, Dr. V.Prabhakara Rao, Former Vice-chancellor of SVVU, Tirupati was the guest of honour, Dr. T.S.Chandrasekhar Rao, Dean, Faculty of Veterinary Science, SVVU, Tirupati was the special invitee. Dr. P.Eswara Prasad, Associate Dean, College of Veterinary Science, Tirupati presided over the function. Approximately 150 retired teachers and old students of Dr. V.Panduranga Rao from different states attended the function. All his students recalled their memories about his teaching, punctuality, sincerity, discipline and helping nature of Dr. V.Panduranga Rao. Dr. M.Parthasarathy, Retired Professor of Animal Nutrition, College of Veterinary Science, Tirupati and former student of Dr. V.Panduranga Rao donated 2 lakhs rupees for instituting a gold medal in the name of Dr. V.Panduranga Rao to be awarded every year to B.V.Sc., & AH students of College of Veterinary Science, Tirupati who have secures highest GPA in the Anatomy Courses.

Dr.Velisetti Panduranga Rao was born to Sri Subba Rao and Smt. C.Rajarathnam on 19th September, 1916 in Madras. In February, 1943 he got married to Smt. C. Rajapushpam. They were blessed with four daughters and a son. All his children were well settled in their life.

He completed his primary schooling in MCT Muthaiah Chettiyar School in Madras, two year intermediate course in Presidency College, Madras and Diploma GMVC and BVSc degree course from Madras Veterinary College. Dr. V.Panduranga Rao was selected under US-AID programme and completed his MS postgraduate degree in Anatomy form Kansas State University, USA.

Dr. V.Panduranga Rao started his career as a Veterinary Assistant Surgeon in 29-10-1942 in the composite State of Madras. After working for four years as Veterinary Assistant Surgeon in 1947 he was transferred to Madras Veterinary College as Assistant Lecturer in the Department of Veterinary Anatomy. In 1953 the division of composite Madras state took place and a new state of Andhra Pradesh was formed. Dr. V.Panduranga Rao was posted as Head of the Department and Gazetted Lecturer of Anatomy and Histology, Andhra Veterinary College, Bapatla. Dr.V.Panduranga Rao played a vital role in establishing the laboratories and department museum. He prepared skeletal structures of all animals and human and he prepared hundreds of histology slides. The staff of different Veterinary Colleges visited this museum on the recommendations of ICAR.

Teaching is his passion. His lectures were thorough, well explained with diagrams and well understood by the students. He was so punctual that the students and staff used to correct the time in their wrist watches. Students were taught discipline, time sense, dress code, punctuality, regularity in studying and prompt submission of practical records. He insisted his students to follow and obey the rules whether it is the college or hostel or playground. He was scrupulous in following rules and regulations. As he always practiced what he preached, students had a lot of fear and respect for the noble teacher i.e Dr V.Panduranga Rao.

Dr. V.Panduranga Rao accepted Sahaj Marg and imparted spiritual training in Sri Ram Chandra Mission. He was considered as Dictionary of Sahaj Marg. He has written many articles in the Sahaj Marg Journal. In the year 1990 a collection of all articles authored by him along with the messages of Shri Bahujui Maharaj were published under the title "Pearls of Wisdom". He always lived a truthful, honest and sincere life. The principles, discipline, punctuality, sincerity and dedication in his duties have made him a living legend in Veterinary Profession.

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