The backyard poultry rearing has been the backbone of the poultry development programme in Kerala. The commercial-scale poultry rearing is limited to broiler production. Nearly 60 per cent of the demand for poultry products are met from outside. The rural backyard poultry is of great importance to the poor farmers in the State. Eggs and meat produced by the rural backyard poultry fetch a much higher price than that from commercial poultry. Significant proportion of the landless and marginal farmers make out their living from poultry and other small ruminants. Backyard poultry requires hardly any infrastructure set-up and is a potent tool for uplifftment of the poorest of the poor. Besides income generation, rural backyard poultry provides nutrition supplementation in the form of valuable animal protein. Backyard poultry should be promoted in view of its importance in rural economy. Tellichery breed is native to Malabar region of Kerala and is reared in the backyard system. Very little information is available on this breed in literature except that plumage colour is reported to vary from black to grey, and eggs tinted and small to medium in size. The native chicken breed of Kerala needs to be evaluated to develop strategies for its improvement and conservation so as to raise the economic status of rural poor. Therefore, an attempt has been made to document characteristics of Tellichery breed of chicken.

**Distribution and Utility**

The breed derives its name from the name of a place ‘Tellicherry’ in Kannur district of Kerala. Presently, these birds are found mainly in
Calicut district and surrounding areas in Kannur and Malappuram
districts of Kerala, and Mahe district of Pondicherry. These are
available mostly in the not so
well developed interior areas.
These birds are fast movers
and are not easy prey for the
predators. These are reared
mainly for meat. Tellichery
birds are also thought to have
some medicinal value. These
are used for preparation of
ayurvedic medicines for
asthma treatment. Its soup is also believed to be beneficial for
treatment of anemia and worm infestation.

Management

Birds are kept in the free range
system. Flock size ranged from
2 to 16 with an average of
about 5.5 birds per household.
Birds roam freely and eat
whatever available in the form
of grains, seeds, vegetation,
insects, etc. Commercial
poultry feed is not fed. Shelter
is provided in wooden houses
raised 2-3' above the ground. Brooding is a usual practice. Mortality
is very low almost nil. Birds are not vaccinated against any disease.

FLOCK COMPOSITION

Hens 81%
Cocks 12%
Chicks 27%

Morphology

Body confirmation is similar to Red Jungle fowl but it is slightly
bulkier. Plumage color is black with shining bluish tinge on hackle,
back and tail feathers. Few birds have golden mixed with bluish
feathers on neck. Pattern is solid. Skin is grayish in colour. Comb is
red, single and large in size. It is erect in cocks and drooping on the
rear side in hens. Typical birds have blackish red comb. Wattles are
red in colour and medium in size. Ear lobe is mostly red in colour with white markings in some birds. Sometimes it is creamy white. Eye ring is blackish red. Beak is blackish in appearance. Shank is featherless and blackish grey in colour.

Performance

Average weight of cock was 1.62±0.16 kg and that of hen was 1.24±0.10 kg. Age at first egg ranged from 5-8 months with an average of about 6 months. A hen lays about 4-6 eggs continuously and then there is a gap of 1-2 days after which it again starts laying. Hen makes lot of sound after laying egg. After about 30 days of egg laying, the hen goes broody and incubates eggs for about 21 days. Brooding period is about 2-2.3 months. One laying cycle takes about 3.7 to 4 months. Egg production per cycle and per annum ranged from 20-25 and 60 to 80 respectively. Hatchability on total egg basis ranged from 70 – 80 percent.

Egg Characteristics

Eggs are tinted in appearance. Egg weight ranged from 34 to 45 g with an average of 40.02±0.94 g. Shell colour was mostly light brown (45%) followed by brown (33%) and creamish white (22%). Egg shell was mostly brittle (78%) and thin with average thickness of 29.22±0.98μ. Albumen was thick in 78 and thin in 22 percent of
eggs. Yolk colour was deep yellow in 67 and yellow in 33 percent of eggs. Albumen index, yolk index and haugh units were 0.061±0.007, 0.32±0.017 and 69.07±3.48 respectively. Blood and meat spots were absent.

Table 1 - Performance characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Average/Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Weight (Kg)</td>
<td>Cock 1.62±0.16</td>
</tr>
<tr>
<td>Hen</td>
<td>1.24±0.10</td>
</tr>
<tr>
<td>Age at first egg (mo)</td>
<td>5-8</td>
</tr>
<tr>
<td>Egg production/cycle</td>
<td>20-25</td>
</tr>
<tr>
<td>Annual egg production</td>
<td>60-80</td>
</tr>
<tr>
<td>Hatchability on total egg basis (%)</td>
<td>70-80</td>
</tr>
</tbody>
</table>

Table 2 - Egg quality parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Average/Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (g)</td>
<td>Albumen 20.34±0.77</td>
</tr>
<tr>
<td></td>
<td>Yolk 15.00±0.47</td>
</tr>
<tr>
<td></td>
<td>Shell 4.68±0.14</td>
</tr>
<tr>
<td></td>
<td>Egg 40.02±0.94</td>
</tr>
<tr>
<td>Shell Colour (% of eggs)</td>
<td>Light Brown 44.5</td>
</tr>
<tr>
<td></td>
<td>Brown 33.3</td>
</tr>
<tr>
<td></td>
<td>Creamy 22.2</td>
</tr>
<tr>
<td>Shell Thickness (m)</td>
<td>29.22±0.98</td>
</tr>
<tr>
<td>Albumen Index</td>
<td>0.061±0.007</td>
</tr>
<tr>
<td>Yolk Index</td>
<td>0.32±0.017</td>
</tr>
<tr>
<td>Haugh units</td>
<td>69.07±3.48</td>
</tr>
</tbody>
</table>

Genetic Characterisation

25 highly polymorphic ubiquitously distributed microsatellites were genotyped to generate allele data. A total of 245 alleles were observed. All the loci were dinucleotide repeats and were suitable for diversity analysis and detecting the population structure. LEI 98, MCW 266 exhibited only 5 alleles while HUJ 003 generated 17 alleles. The mean number of alleles was 9.8±0.40. The value of effective number of alleles (5.02±0.26) was significantly less and can be attributed to the fact that a large number of alleles were at very low frequencies. The observed heterozygosity was
quite high (0.65±0.16) and ranged from 0.41 (LEI 64, MCW 305) to 0.94 (HUJ 003). The mean observed heterozygosity was however less than the expected heterozygosity (0.78±0.01) pointing towards the existence of population structure in Tellichery breed. The Polymorphic Information Content (PIC) estimated on the basis of allele frequency and gene diversity was 0.77 and 0.73 respectively. The population structure was present as the FIS was significantly different from Zero (0.174). There was no severe reduction in population size of Tellichery breed in recent past as indicated by normal L-shaped curve.