Indigenous moulting practices: Tradititional knowledge with Indian rural poultry farmers

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This paper outlines the salient features of cultural sustainability by emphasizing the traditional knowledge of poultry farmers of southern India. Two southern states of India namely Karnataka and Kerala were included in the study with an objective to explore the traditionally induced moulting practices. The study revealed five different traditional moultng practices namely dipping in water, applying mud, applying ash, quarantine of birds to dark locations and fixing the feathers on to the beak. This study has shown that the existence of traditional practices seems to make sense in areas without veterinary services and empowers local farmers to try to manage their flock's problems in a cost effective way.

Keywords: Natural moulting, Poultry.

"Traditional knowledge is not an abstract scientific knowledge. It is concrete, relies strongly on historical experience and directly perceivable evidence and environmIntally, culturally friendly approach for development"

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In recent years, there has been a resurgence of interest in traditional practices in the developing world. In livestock, this has led to further interest in ethno-veterinary research and development, a relatively new field of study that covers traditional practices and their application embedded in local tradition.

Poultry farming has been an integral part of human civilization and culture in India. Poultry farmers have been evolving several traditional practices through trial and error, keen observation, and evaluation to improve the production. One among them is induced-moulting practice followed by rural poultry farmers. Moulting is a physiological process which includes shedding and regrowth of feathers and ending egg
production. It is a phase of physiological pause, where there is an appreciable reduction in body weight and regression of ovary and oviduct. Moulting provides the birds with a rest from egg production and allows time for rejuvenation. The fall of feathers in natural moulting occurs in a definite order i.e. starting from head followed by neck, breast, body, and wings and finally tail, which nearly takes about 3-4 months. Time and duration of moulting are important for differentiating good and poor layers. Good layers are late and fast moulters whereas, poor layers are early and slow moulters.

Realizing the importance of moulting in production, a thought to hasten up the process was entrenched. This includes traditional and scientific methods; the latter includes feed and water restriction, light restriction, etc., which not only causes severe stress to the birds but also has attracted wrath of animal welfare societies. Whereas, traditional methods are more humane in nature. To lay much emphasis on ethical and human values in livestock research, blending of traditional and scientific technologies is needed to come up with humane methods of moulting practices.

At this juncture, identifying the existing traditional moulting practices followed by poultry farmers in different regions of the country will certainly pave the way in developing humane methods of moulting practices. Keeping this in view, the present study was taken up with an objective to explore the traditionally induced moulting practices followed by the poultry farmers in India.

**Methodology**
Field work was carried out from January 2002 to December 2002. The rural poultry farmers were contacted through the local veterinarians throughout the country. However, reasonable response was received only from Karnataka and Kerala (Fig. 1). The response regarding traditional moulting practices was ascertained through the local veterinarians. The data were collected from the poultry farmers with the help of structured questionnaire and analyzed with the help of frequencies and percentages.

**Results**
The data from Table 1 suggests that the veterinarians of Karnataka and Kerala are very much interested in preserving the traditional knowledge in poultry farming. It is also revealed that the commercial farmers do not have inclination towards the traditional moulting practices.

The poultry farmers in the study area follow five different traditional induced moulting practices, as shown below:

1. **Dipping in water**—In this practice, the bird is caught by its legs, dipped in water and removed. This process is repeated for 10-15 times and then the bird is left free.

2. **Applying ash**—This practice involves restraining the birds and applying ash in the reverse direction of feathers in a definite order, starting from head followed by neck, breast, body, wings and finally tail. After this the birds are confined for few hours, so that the applied ash is not
wiped off and then the birds are let loose.

3. **Applying mud**—In this type of traditional method, thick mud is applied all over the body and for drying up the mud, the birds are sheltered in a confined place for few hours and then the birds are eased.

4. **Quarantine the birds to dark locations**—This traditional method involves isolation of birds in darker places (mini-huts) for three to four weeks. The separate mini-huts are protected against predators.

5. **Fixing feathers on to the beak**—In this traditional method, initially the

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### Table 1—Present status of the poultry population in Karnataka and Kerala

<table>
<thead>
<tr>
<th>State</th>
<th>Population (Lakhs)</th>
<th>Number of local veterinarians Responded</th>
<th>Reported the traditional moulting practices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karnataka Backyard</td>
<td>5.72</td>
<td>114</td>
<td>5(4.38)*</td>
</tr>
<tr>
<td></td>
<td>Commercial</td>
<td>114</td>
<td>0(0.00)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerala  Backyard</td>
<td>1.91</td>
<td>38</td>
<td>3(7.89)</td>
</tr>
<tr>
<td></td>
<td>Commercial</td>
<td>38</td>
<td>0(0.00)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>78.65</td>
<td>152</td>
<td>8(5.26)</td>
</tr>
</tbody>
</table>

*Figures in parenthesis show percentages

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Fig. 1—Distribution pattern of traditional induced moulting practices in Karnataka and Kerala
birds are restrained by its legs and then quill of the feather is passed through and through the nostrils and observed for few weeks. Here care is taken that the bird does not harm itself or others with the quill.

Discussion
Traditional knowledge is based on one's own experience and easily acceptable to farm families, since it is being used from generations. It finds a wider scope in rural areas, as this is cost-effective. It is observed that traditionally induced moulting practices are friendly as they cause little stress to the birds. Traditional practices that are the storehouse of knowledge of rural poultry farmers need to be documented, validated and communicated effectively through appropriate communication techniques. Traditional knowledge often makes sense, albeit with some regulation to ascertain safety and to prevent abuse. It is suggested that the development plans should accommodate for the traditional practices of rural people.

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