LESSON 15: TURKEY FARMING

STRUCTURE

• Origin and characteristics of turkey
• Benefits of turkey farming
• Rearing of turkey
• Common turkey breeds
• Turkey farm at CARI
• Inputs requirement
• Summary

LEARNING OUTCOME

After going through this lesson, you will be able to:

• Gather information on benefits and purpose of turkey farming.
• Identify different breeds of turkeys.
• Know about various turkey farms.
• Study management tips of turkey farming

ORIGIN AND CHARACTERISTICS OF TURKEY

Originated from Central and Northern America. Domesticated 300 years back by Europeans colonized in North America. Bigger in size, cut-up parts are marketed as edible meat. Among the various poultry species, turkey is mostly reared for meat purpose. In India, turkey production is still in its infancy (initial stage). Small flocks are available at some of the Agricultural Universities and Private farms for research and development purpose only. Since the turkey pouls and hens are bigger in size, their cut-ups can be marketed in various attractive packaging suited to the individual consumer. They are more resistant to disease than chicken and therefore, rarely suffer from diseases.

Turkeys differ from chicken in many ways. The main differences are as follows:

• They are generally big in size; adults of some of the breeds can weigh as much as 10 kg and above.
• Unlike chicken, they will not have combs and wattles on the head. But, both sexes have dew lap, loose skin under the neck similar to cattle.
• They do have long tail feathers but none of them in sickle shape. You know that in case of chicken, cocks will have long, sickle like feathers at the tail called “Sickle feathers”.

• Males are called “Toms” which will have a many tail feathers which it can spread like a fan to attract the females which are called “Turkey hens”.

• Sound produced by turkey (both males and females) is called “Gobbling”. In case of chicken, cocks crow and hens cackle.

**BENEFITS OF TURKEY FARMING**

The turkey farming has the following benefits:

• Grows very fast

• Can be reared in free range system in the backyards

• Quite suitable for upliftment of small and marginal farmers.

• Turkey egg weighs 1.3 times more than the chicken egg.

• Better forager than the chickens

• Relatively more resistance to diseases than the chickens.

• The turkey meat is a preferred meat especially during Easter and Christmas celebrations. Turkey meat is known for its low fat and low cholesterol contents and hence, it fetches higher price at the market.

• Turkey meat is considered as white meat and is preferred for its leanness and delicacies/ flavour.

**REARING OF TURKEYS**

• As per 19th Livestock Census-2012, the turkeys and other birds are 13 millions i.e. 2% of total poultry population of 729 millions.

• Turkey is reared for eggs and meat purposes.

• Turkey can be easily reared in free range or semi-intensive system with minimal investment for housing, equipment and management.

**Male (Tom) and Female Turkey (Hen)**

• Males have caruncles on head and neck and a snood (long loose skin running over the beak (Fig. 1).

• Males spread tail feathers into a fan – like shape to attract the female during breeding.

• Females will not have distinct snood and caruncles.
COMMON BREEDS OF TURKEY

• **Belts Ville White (Fig.2):** It is a medium sized turkey having white feathers. They produce more eggs compared to Broad Breasted Bronze and therefore included in breeding programmes. The toms will be weighing 10-12 kg at maturity and hens 7-8 kg.

• **Broad Breasted Bronze (Fig.3):** It is the most popular and heaviest variety of turkey. As the name indicates, it is having a broad and prominent chest region and bronze coloured feathers. The males and females at maturity weigh 15-18 kg and 12-13 kg, respectively. Most of the present day hybrid turkeys are crosses of different strains of Broad Breasted Bronze or Belts Ville White. One of the common hybrid turkeys popular in North America is Nicholas Turkey. It is the cross of the above two.

• **White Holland:** It is a popular variety of turkey most commonly found in European countries. It is bred and developed in Holland after importing several varieties from North America. They are also used as crosses.

• **CARI Virat** variety of CARI: Low fat, Low cholesterol, Choicest white meat, Fertility 94%, Hatchability 84%, Suitable for backyard rearing.
Production Characteristics of CARI Virat Turkey

<table>
<thead>
<tr>
<th>Age in weeks</th>
<th>Body Weight g</th>
<th>Feed Conversion Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1054</td>
<td>1.85</td>
</tr>
<tr>
<td>8</td>
<td>1748</td>
<td>2.05</td>
</tr>
<tr>
<td>10</td>
<td>2101</td>
<td>2.37</td>
</tr>
<tr>
<td>12</td>
<td>2778</td>
<td>2.80</td>
</tr>
<tr>
<td>24</td>
<td>5270</td>
<td>3.78</td>
</tr>
<tr>
<td>32</td>
<td>7100</td>
<td>4.15</td>
</tr>
</tbody>
</table>

- Nandnam variety of TANUVAS
- Royal Palm
- White Holland

TURKEY FARM AT CARI (Fig. 4)

Fig. 4: Turkeys on Floor at CARI
INPUTS REQUIRED

- Finance
- Land
- Electricity
- Water
- Building/Houses
- Chicks/Brooders
- Cages
- Feeders
- Waterers
- Feed
- Medicines
- Vaccines
- Transportation
- Manpower
- Know-how
- Shelter for staff
- Security
- Store House/Freeze

MANAGEMENT OF TURKEY

Housing

Due to their large size, turkeys are invariably reared on floor; either completely inside a house on deep-litter or on semi-intensive system. Semi-intensive system is more common. Floor, feeder and drinker space requirements of turkey on deep-litter system are tabulated as below:

Space requirements of large turkeys on deep-litter

<table>
<thead>
<tr>
<th>Age</th>
<th>Floor space (m²/bird)</th>
<th>Age</th>
<th>Feeder space (cm/bird)</th>
<th>Age</th>
<th>Drinker space (cm/bird)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brooder (hover) space</td>
<td>0.003</td>
<td>0-1 week</td>
<td>3.0</td>
<td>0-1 week</td>
<td>2.5</td>
</tr>
<tr>
<td>0-4 weeks</td>
<td>0.135</td>
<td>1-2 weeks</td>
<td>6.25</td>
<td>1-4 weeks</td>
<td>2.5</td>
</tr>
<tr>
<td>4-8 weeks</td>
<td>0.180</td>
<td>2-4 weeks</td>
<td>7.5</td>
<td>4-8 weeks</td>
<td>2.5</td>
</tr>
<tr>
<td>8-12 weeks</td>
<td>0.270</td>
<td>4-8 weeks</td>
<td>10.0</td>
<td>&gt;8 weeks</td>
<td>3.0</td>
</tr>
<tr>
<td>&gt;12 weeks</td>
<td>0.450</td>
<td>&gt;8 weeks</td>
<td>12.5</td>
<td>Adult</td>
<td>3.5</td>
</tr>
<tr>
<td>Adult</td>
<td>0.720</td>
<td>Adult</td>
<td>15.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Adapted from: Wilson et. al., 1997
Generally, turkeys are reared under semi-intensive system (Fig. 5) from 9th week onwards. Each turkey (including adults) requires a shelter area 0.1 m²/bird. Land requirements are 0.6, 1.5, 2.0 and 2.4 m²/bird during 9 to 12 weeks, 13 to 16 weeks, 16 to market and adults (breeders), respectively.

Feeding
Turkey chicks referred to as “Poults” have to be given special care because they do not start eating as soon as they are left under the brooder. Death due to starvation is the most common cause of mortality in poults. Second factor one has to watch is the leg weakness. Administration of vitamins in water and ensuring that they eat and drink properly, solves most of the problems. At once they cross about 4 weeks of age, they are quite hardy and easy to manage. In our country, feed exclusively for turkey is not available. For turkeys meant for meat and sold at around 16 to 20 weeks of age, broiler starter ration can be given till 8 weeks of age followed by broiler finisher ration till market. If the turkeys are meant for breeding and egg production, they can be offered layer ration after first egg is recorded at the farm.

Management
Brooding is similar to chicken and as described above special care is compulsory during brooding. Turkey, as a species, is more susceptible to cold. Therefore, brooding period can be extended till 6 to 8 weeks depending on temperature.

(i) Shooting the red
At 6 to 8 weeks of age, head parts become bright red in males indicating the development of caruncles and snood. This is referred to as “Shooting the red”. Sexing can be done easily at this stage.
(ii) **Beak-trimming and de-snooding**

The procedure is similar to that in chicken but done at 3 to 5 weeks of age. Desnooding (removal of snood) can be practiced. You may now ask, why to remove snood? In turkey, head injuries can spread a disease called Erysipelas which can be prevented by desnooding. The procedure is to cut by thumb nail or thumb pressure at hatch or by cutting it off close to head by a sharp scissors at about 3 weeks of age.

(iii) **Wing-notching or wing clipping**

This procedure is practiced in small sized turkeys which can fly. To prevent flight, wing feathers can be clipped before 2 weeks of age. This is a very simple procedure. Alternatively, a tendon crossing the centre of the outermost joint in the wing is cut at 5 to 8 weeks of age by a specialist. However, in turkeys for meat and breeding (egg production), this procedure is not advisable.

(iv) **Egg production**

All management steps are similar to chicken. The following are the modifications in practiced. Breeding turkey hens are saddled (special cover over the back) to prevent injury while mating because of heavy weight of toms. However, in heavy turkeys, mating frequency and efficiency will not be satisfactory and hence, in most farms, artificial insemination is followed. Frequency of insemination is once every 10 days. If mating is allowed, 10, 12 and 14 hens can be allowed per Tom in case of large, medium and small breeds, respectively.

(v) **Incubation and Hatching**

Hatching eggs must be collected from hens tested free of Pullorum and Mycoplasma infections. Incubation of eggs is similar to chicken except that total incubation period is 28 days. Eggs are transferred from setter into the hatcher on 25th day. If the eggs are held for more than one week before setting, they have to be turned daily.

**Fig. 7: Turkey egg**
SUMMARY

• Turkeys are reared for hatching eggs, day-old chicks, table eggs and meat purposes.
• Turkey farming very common to poor sections of rural masses.
• Turkey meat is low in fat and cholesterol content but high in protein.
• Turkey meat is preferred by consumers for its delicacies and flavour.

WEB RESOURCES

http://vikaspedia.in/agriculture/poultry/turkey-farming
http://www.agrifarming.in/turkey-farming-information/
http://agritech.tnau.ac.in/farm Enterprises/Farm%20enterprises_%20turkey.html
http://www.elearnvet.net/moodle/file.php/32/Articulate/Chapter-13_Turkey_Guinea_Fowl/L-13/player.html
http://ecoursesonline.iasri.res.in/mod/page/view.php?id=57906
http://www.cpdosrbng.kar.nic.in/TURKEY%20FARMING%20GUIDE.pdf
https://www.youtube.com/watch?v=0uUqcZrcB8
https://www.youtube.com/watch?v=eK5Yccbz9_g
https://www.youtube.com/watch?v=SXFbHZpiZs