

---

## UNIT 11 BEAK-TRIMMING IN POULTRY

---

### Structure

- 11.1 Learning Outcomes
- 11.2 Introduction
  - 11.2.1 Meaning of Beak-trimming (Debeaking)
  - 11.2.2 How the Beak-Trimming Practice Developed?
- 11.3 Why Beak-Trimming?
  - 11.3.1 When Beak-trimming is Performed?
- 11.4 Methods of Beak-Trimming
  - 11.4.1 Normally Beak-trimmed Poultry Birds
  - 11.4.2 Beak-trimming Methods
    - 11.4.2.1 Heat Blade Method
    - 11.4.2.2 Cold Method
    - 11.4.2.3 Electrical Method (Bio-beaker)
    - 11.4.2.4 Infrared Method
- 11.5 Welfare Concerns, Alternatives and Precautions in Beak-Trimming
  - 11.5.1 Welfare Concerns
  - 11.5.2 Alternatives to Beak-trimming
    - 11.5.2.1 Genetic Interventions
    - 11.5.2.2 Housing Enrichment and Changing the Light Intensity
    - 11.5.2.3 Nutrition Interventions
  - 11.5.3 Beak-Trimming Precautions to Reduce Pain and Stress
- 11.6 Let Us Sum Up
- 11.7 Keywords
- 11.8 Bibliography and Further Reading
- 11.9 Self Assessment Exercises
- 11.10 Answers/Hints to Check Your Progress

---

### 11.1 LEARNING OUTCOMES

- a) **Knowledge and Understanding:** After studying this Unit, you will be able to:
  - Understand the meaning and purpose of beak trimming.
  - Explain the economic and behavioral reasons behind beak-trimming.
  - Distinguish the precautions to be taken before, during and after beak-trimming to reduce pain and stress.
- b) **Practical and Professional Skills:** After studying this Unit, you will be able to:
  - Discuss different methods of beak-trimming.
  - Demonstrate the main welfare concerns and alternatives to beak-trimming.

## 11.2 INTRODUCTION

*“Beak-trimming will always cause a deprivation of sensory input in the beak; the end goal should be the avoidance of beak-trimming altogether through genetics, housing conditions, and management”*

**- Philip C. Glatz**

Dear Learner,

In the unit 10 on ‘Welfare Issues in Commercial Layers’ we studied briefly about beak trimming in commercial layers. In this unit let us discuss more details about beak trimming along with the methods and welfare issues associated with it.

### 11.2.1 Meaning of Beak-trimming (Debeaking)

Beak-trimming is also popularly known as debeaking. It is undertaken usually after 6 weeks of age and most often in the grower house. It can be done in the brooder house also at early age. Beak trimming is the removal of approximately one-quarter to one-third of the upper beak, or both upper and lower beak of a bird (Gentle *et al.*, 1995). For the majority of birds, it involves the partial removal of the upper and lower beak using an electrically heated blade.

More recently, scientists have used the term ‘partial amputation’ instead of beak-trimming, although the beak does re-grow and receptors are functional in the regenerated beak tissue (Glatz *et al.*, 1998).

### 11.2.2 How the Beak-Trimming Practice Developed?

Increase in cost of land and wages of labour has made deep litter system costly. Therefore, alternate systems in which birds are totally restricted to meshwork compartments (cages) were introduced in the early 1920s. Due to less space and crowding, poultry birds got fewer options for natural behaviours like scratching, dust bathing and started pecking each other leading to feather pecking and cannibalism (Box 11.1). To prevent this, beak trimming or beak mutilation practice was developed by farmers in the following forms during 1920s to 1940s:

- Trimming / Paring of the tip of the upper beak
- Upper beak burning and cauterising with:
  - o Heated knife
  - o Gas torch
  - o Soldering iron

A heated knife attachment with frame was developed and named it as ‘debeaker’ by Lyon Electric Company in 1942 and registered in 1943 (Davis, 2008).

#### **Box 11.1: Injurious Pecking**

In Unit 10, we discussed that injurious pecking in laying hens is a major welfare concern that can spread through flocks, resulting in pain and high mortality. Injurious pecking can occur in all types of layer hen housing. In cage systems persecuted birds are unable to escape, but the problem tends to be confined to particular cages. In non-cage systems, once injurious pecking

starts it can spread rapidly throughout the whole flock. Injurious pecking comprises (Nicol, 2013):

- Feather pecking
- Vent pecking and
- Cannibalism

Savory (1995) reported that cannibalism develops either as a result of misdirected ground pecking or is associated with the dust bathing behavior. Cannibalism is a learned behaviour and it spreads very fast. It has been reported in all types of housing systems. The potential for the behaviour to spread may be increased in large flocks, as more birds are likely to learn the behaviour or to become victims. Due to the restrictive nature of battery cages, hens are unable to access many other birds, which may make the behaviour easier to manage, although, feather-pecked hens in cages are unable to escape from more aggressive cage mates. Feather pecking is the precursor of cannibalism (Rokade and Gopi, 2017).

### 11.3 WHY BEAK-TRIMMING?

Farmers usually perform beak-trimming due to following economic and behavioural reasons:

- Beak trimming is performed early in the life of commercial hens to decrease injuries caused by the behavioural bad habits (vices) like:
  - a) Pecking and eating one's own species (cannibalism)
  - b) Bossing over others (bullying)
  - c) Feather and vent pecking.
- To avoid feed wastage:
  - a) Quantitative: Birds have a natural tendency to scratch the feed and search for grains especially when feed is in the mash form. In this process, there will be spillage of feed from the feeders.
  - b) Qualitative: Grower ration comes as mash (powder form). Birds do establish a peck order within the enclosure. The stronger birds eat feed first and preferentially pick and eat the grains (also a natural instinct) if beaks are not trimmed. It is well known that the grains are energy-rich and poor in all other nutrients. Hence, the stronger birds become weaker. When the weaker birds reach the feeders after the stronger ones have left, they will be left with only powdery feed which they cannot eat because of sharp beaks. Therefore, they also suffer nutrient deficiency and become weaker. Consequently, the entire flock shows a poor feed conversion ratio and farmer will be at loss. If the beaks are trimmed, the birds cannot search for grains. Instead, they have to scoop the feed and eat thereby making available all components of the feed to all the birds ensuring uniform growth, production and reproduction.
- To avoid egg-eating vice.
- It reduces aggressive interaction among birds and trimmed laying birds are less fearful than untrimmed ones, both in multi-bird cages and in floor pens.

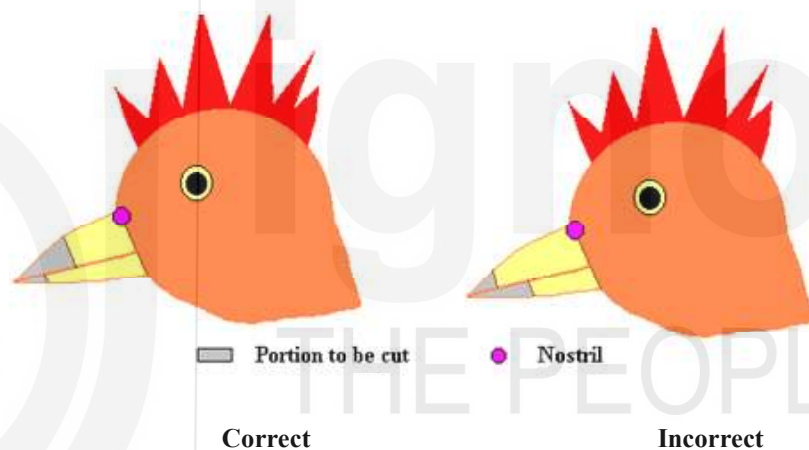
### 11.3.1 When Beak-trimming is Performed?

The common ages for birds to be beak-trimmed are:

- Day-old (very common)
- 5–10 days old (precision or block beak-trimming)
- 4–6 weeks
- 10–12 weeks (re-trimmed)

Many hatcheries are reluctant to carry out beak-trimming prior to delivery of chicks. Already baby chicks are exposed to pain and stress during sexing of day old chicks, vaccination, and transportation. Therefore beak-trimming adds further pain and stress to the chicks. However, day-old trimming results in fewer birds needing to be re-trimmed and also it can avoid bird handling stress at important growing stages of life (Andrade and Carson, 1975).

For birds 10 to 12 weeks of age, beaks should be trimmed 6 to 7 mm beyond the nostril with 2 seconds of cauterization (Figs. 11.1, 11.2 and 11.3).



*Fig. 11.1: Beak trimming – procedure(L L L rule: Leave Lower beak Longer)*



*Fig 11.2: Normal beak*



*Fig 11.3: Trimmed beak*

(Source: OLP-001, IGNOU Course Material)

#### Check Your Progress 1

**Note:** a) Use the spaces given below for your answers.

b) Check your answer with those given at the end of the unit.

1) Write the meaning of beak-trimming.

2) How the beak trimming practice developed?

3) Why farmers usually perform beak-trimming?

## 11.4 METHODS OF BEAK-TRIMMING

### 11.4.1 Normally Beak-trimmed Poultry Birds

Beak - trimming is one of the most common methods used in layers and turkey birds to control peck injuries. Poultry birds that are normally beak-trimmed are summarised in Box 11.2.

#### Box 11.2: Beak-Trimmed Poultry Birds

Poultry birds that are normally beak-trimmed are:

- Laying hens
- Turkeys
- Broiler breeders ( as they are kept for a long time)
- Quails
- Ducks

Broilers meant for meat are not normally beak-trimmed as they are marketed by 5-6 weeks before injurious pecking starts.

### 11.4.2 Beak-trimming Methods

Different methods of beak trimming are broadly classified under four categories:

- Heat blade method
- Cold method (scissors or secateurs)

- Electrical (Bio-beaker)
- Infrared

Salient points under these methods are given below very briefly for your understanding.

#### 11.4.2.1 Heat Blade Methods

Consists of a hot plate / soldering iron (heated with gas / electricity) and cutting bar operated using a foot lever. Size is small and it's very easy to handle or transport. Beak is cut and cauterized simultaneously in these methods.

#### 11.4.2.2 Cold Methods

In cold method, the beak is cut with clippers / scissors/ secateurs without cauterizing. Later cauterization is done with hot plate/iron touch.

#### 11.4.2.3 Electrical Method (Bio-beaker)

The Bio-beaker, which uses an electric current to burn a small hole in the upper beak and is the preferred method for trimming the beaks of turkeys.

#### 11.4.2.4 Infrared Method

The infrared method directs a strong source of heat into the inner tissue of the beak and after a few weeks, the tip of the upper and lower beak dies and drops off making the beak shorter with blunt tips.

The electrical and infrared methods are relatively welfare friendly compared to hot and cold blade methods as the former methods involve only the removal of beak tip only without an open wound. Other methods like lasers, freeze drying and chemicals have been tried, but are not popular. As per the Farm Animal Welfare Council - UK, cold cutting was the most accurate method in turkeys, but substantial re-growth of the beak occurred; although the Bio-beaker limited beak re-growth, it was less accurate. It was considered that the hot cut was the most distressing procedure.

Before we proceed, please complete activity 1.

**Activity 1 (Visit):** Visit a nearby poultry layer farm and discuss with farm manager about method(s) of beak-trimming they are practising. Discuss the welfare concerns and write your observations.

.....

.....

.....

.....

.....

.....

.....

.....

**Note:** a) Use the spaces given below for your answers.

b) Check your answer with those given at the end of the unit.

1) Name the poultry birds that are normally beak-trimmed.

.....

.....

.....

.....

.....

2) Why broilers are normally not beak-trimmed?

.....

.....

.....

.....

.....

3) Enlist different methods of beak trimming.

.....

.....

.....

.....

.....

## **11.5 WELFARE CONCERNS, ALTERNATIVES AND PRECAUTIONS IN BEAK-TRIMMING**

### **11.5.1 Welfare Concerns**

In a normal poultry bird, the functions of beak are:

- Feed particle identification
- Exploration of the environment
- Preening – Maintenance behaviour using beak to position and interlock feathers, clean plumage and keep ecto-parasites in check.
- Social defense

Beak trimming elicited a great deal of debate regarding its advantages and disadvantages vis-à-vis welfare of poultry birds (Box 11.3).

### Box 11.3: Beak- trimming of Chicks in Poultry Farms - A Senseless Act of Cruelty

Do you know what operations the chicks in poultry farm undergo under the name of cost cutting? The upper part of their beaks gets cut off so that they don't harm other chicks. Although it's a 'routine' business, it's not as trivial as clipping your nails. Now, why would they hurt other chicks? Because of a great deal of stress to the factory chickens which in turn is due to:

- Overcrowding
- Forced-lighting
- Unnatural feeding

To ensure that losses through such acts of "cannibalism" (as the industry calls it) are minimised, the poultry farmer routinely cuts off the chicken's beak. This practice is called 'debeaking or beak-trimming'.

**How did Debeaking Start? :** It began in 1920s-40s, when American farmers discovered that if they burned away the upper part of the beak of chickens with a blowtorch, they won't be able to pick and pull each other's feathers. Later they modified the blowtorch into a soldering iron. A few years later, a local company began to manufacture the "Debeaker" – a machine that sliced off the tips of birds' beaks with a hot blade. This machine, with a few modifications, is what each factory farmer still uses today, whether in America, Europe or India.

Broiler chickens require no debeaking or only one debeaking because they are killed in 5-6 weeks of age. Most egg producers cut their birds' beaks twice: once when they are day old to one week old and then again when the birds are around 12 weeks of age. To save money, the debeaking procedure is carried out as quickly as possible. Experts recommend that the optimum value for money is 15 birds a minute. Because of this haste and monotony of the work, the beaks of many birds are sloppily cut. Also, the labourers employed in a poultry farm are illiterate, coarse and insensitive, as most of the butchers. Do they care whether the knife cuts too deep or too close? This is what happens, according to the description given by a journal for the poultry industry:

An excessively hot blade causes blisters in the mouth. A cold or dull blade may cause the development of a fleshy bulb-like growth at the end of the mandible. Burned or severed tongues result in worthless hens.

Even as I write this piece or you read it, hundreds of fluffy little chicks have had already gone through this ghastly and painful mutilation. Sometimes this operation, even when it is done properly, causes several other problems. In an article, "Mechanical Failures Plague Cage Dwellers", taken from a farm news journal, a farmer writes: *"Sometimes the irregular growth of beaks on debeaked birds makes it difficult or impossible for them to drink where a normal bird would have no trouble."*

Of course, the poultry industry insists that debeaking is painless and that it is comparable to trimming one's fingernails. This is completely untrue. Twenty-five years ago, the British Parliament appointed the Brambell Committee to investigate animal welfare in factory farms. This is part of what the Brambell Committee said on debeaking:



“Irrespective of whether the operation is performed competently, we are convinced that it causes considerable pain, lasting for much longer than the second or so that the operation takes to perform. It has been frequently represented to us that the operation is similar to the clipping of fingernails of humans. There is no physiological basis for this assertion. The hot knife used in debeaking cuts through a complex of a horn, bone and sensitive tissue causing severe pain.”

In some factory farms, the birds are not only debeaked, their toes are clipped too, using the same hot knife machine. This operation is said to keep the birds “quieter” because of the extreme pain that moving would cause them after debeaking. Imagine your toes cut off without anaesthesia.

Are you appalled by this operation? It is just one of a series of mechanical operations and injections that the bird goes through. If you don’t believe me, write to the factory whose names are on the egg carton that you buy or on the neatly-wrapped chicken body under the cellophane, and ask them whether they debeak their birds. Or ask your state animal husbandry department inspectors. The answer will be yes. The only thing you can do then is to stop being the consumer and therefore the co-perpetrator of this senseless cruelty.

*Source: Smt. Maneka Gandhi, Firstpost, August 22, 2016*

Welfare concerns of beak-trimming include:

- An acute and chronic pain originating from the amputated end which leads to reduction in:
  - o Feed intake
  - o Pecking efficiency
  - o Pecking preferences
  - o Drinking ability
- Removal of sensory receptors with loss of temperature and touch responses.
- Stress of varying nature depending on age of bird and method of beak-trimming.
- Beak damage, shorten and uneven beak leading to:
  - o Impaired identification of feed particles
  - o Inability to explore environment
  - o Impaired preening and social defense

## 11.5.2 Alternatives to Beak-trimming

### 11.5.2.1 Genetic Interventions

Molecular technology, gene mapping and biotechnology tools provide alternative strategies for improving welfare such as control of pecking behaviour. Selection for low mortality reduces propensity of birds to develop feather pecking and cannibalism. Cannibalistic deaths occurred less frequently in stock selected on family performance without beak-trimming hens. Primary breeders need to select strains with a low pecking tendency.

### 11.5.2.2 Housing Enrichment and Changing the Light Intensity

Environment enriched cages with sufficient perch space, good water and feed management and litter quality improves welfare of birds by reducing aggressive behaviour and pecking. Light plays an important role in manipulating social behaviour of flock. Currently, the most useful method to prevent feather pecking and cannibalism is to house birds under very dim white light.

### 11.5.2.3 Nutrition Interventions

Lower density diets with higher fibre levels will make birds spend more time on feeding. Placing semi-solid milk blocks in the house, hanging green leafy vegetables and spreading grass clippings can prevent feather pecking. Millrun oat hulls, rice hulls and lucerne meal are effective sources of fibre. Providing adequate minerals, amino acids and vitamins minimises pecking mortality.

## 11.5.3 Beak-Trimming Precautions to Reduce Pain and Stress

Taking some precautions while beak trimming will minimise welfare problems. They are summarised in Box 11.4 under precautions before, during and after beak-trimming.

### Box 11.4: Beak-Trimming Precautions to Reduce Pain and Stress

#### Precautions before Beak-trimming

- You will naturally expect bleeding when beak is cut. Therefore, administering vitamin K through drinking water 2 to 3 days before trimming can reduce bleeding.
- Birds should not be subjected to stress from housing, vaccination or deworming during the week before or after trimming.
- Sick birds should not be beak-trimmed.

#### Precautions during Beak-trimming

- You should hold the bird in such a way that it neither shakes its head nor suffocates.
- The beaks are opened with the help of index finger and the tongue is held back.
- The upper beak is cut first to the recommended level. The beak is held against the blade and circular motion is given for at least 2 seconds while holding to effect proper cauterization (blocking of cut blood vessels by heat).
- Lower beak is then cut as per the recommendation.
- Proper cauterization is once again ensured before the bird is left into the pen.

*Note:* If toe nails are grown in excess, they can also be trimmed.

#### Precautions after Beak-trimming

- Feeders must be kept full with feed to help birds eat easily. Probably, this is the only occasion when feeders are full with feed.
- Vitamins B-complex, C and K to be given through water to reduce stress.

- All the birds must be observed carefully for any bleeding, especially in the upper beak. If any bird shows bleeding, it must be separated at once and treated. Otherwise, there is a likelihood of cannibalism.

*(Source: OLP-001, IGNOU Course Material)*

Before we proceed, please complete activity 2.

**Activity 2:** Read the following two view points:

*“Beak-trimming will always cause a deprivation of sensory input in the beak; the end goal should be the avoidance of beak-trimming altogether through genetics, housing conditions, and management” - Philip C. Glatz*

*"The emotion-laden word "mutilation" is sometimes used in describing husbandry practices such as removing a portion of a hen's beak. However removal of certain bodily structures, although causing temporary pain to individuals, can be of much benefit to the welfare of the group"- James V. Craig*

Which one you support and why? Based on your understanding of the discussion presented in this unit, write your response.



# Right

## THE PE

## UNIVE

### Check Your Progress 3

**Note:** a) Use the spaces given below for your answers.

b) Check your answer with those given at the end of the unit.

1) Write the normal functions of beak in poultry birds.

.....

.....

.....

.....

2) What are the major welfare concerns in beak-trimming?

.....

.....

.....

.....

.....

3) How housing enrichment and changing the light intensity helps in improving welfare?

.....

.....

.....

.....

.....

4) Write two precautions to be taken before, during and after beak-trimming.

a) Before beak-trimming:

.....

.....

.....

b) During beak-trimming:

.....

.....

.....

c) After beak-trimming:

.....

.....

.....

---

## 11.6 LET US SUM UP

---

- Beak trimming involves removing a portion of the beak which is often practiced to reduce feather pecking, aggressive pecking and cannibalism in laying hens.
- It is a very common management practice in poultry layers causing severe pain and sensory damage to the beak.
- Due to less space and crowding in cages, poultry birds have fewer options for natural behaviours like scratching and dust bathing, and start pecking each other leading to feather pecking and cannibalism. To prevent this, beak trimming practice was developed by farmers.

- Farmers perform beak trimming due to economic and behavioural reasons, to decrease injuries caused by the behavioural bad habits, to avoid feed wastage, to avoid egg-eating vice and to reduce aggressive interaction among birds.
- The poultry birds that are normally beak-trimmed are laying hens, turkeys, broiler breeders, quails and ducks.
- Broilers meant for meat are not normally beak-trimmed as they are marketed at an early age.
- Different methods of beak trimming are heat blade method, cold method, electrical and infrared methods.
- The major welfare concerns of beak-trimming are: acute and chronic pain which leads to reduction in feed intake, pecking efficiency and preferences, drinking ability and removal of sensory receptors, The other concerns are stress, beak damage, shorten and uneven beak.
- Management precautions before, during and after beak-trimming helps in reduction of stress.
- Beak-trimming will always cause pain and deprivation of sensory input in the beak. The end goal of scientific research should be the avoidance of beak-trimming altogether through genetics, housing conditions, and management.

---

## 11.7 KEYWORDS

---

**Beak Trimming:** Beak trimming involves removing a portion of the beak which is often practiced to reduce feather pecking, aggressive pecking and cannibalism in laying hens.

**Cannibalism:** Cannibalism occurs when the flesh or blood of another individual of the same species is consumed. It is a common problem in poultry, particularly laying hens.

**Feather Pecking:** Gentle feather pecking occurs when one hen pecks at the feathers of another, without pulling or removing the feathers. Severe feather pecking occurs when feathers are pulled violently or removed.

**Preening:** It is a maintenance behaviour that involves the use of the beak to position feathers, interlock feathers, clean plumage, and keep ecto-parasites in check.

**Vent Pecking:** As with feather pecking, vent pecking can lead to cannibalism. Vent pecking is directed at the tissue around the cloaca.

---

## 11.8 BIBLIOGRAPHY AND FURTHER READING

---

Andrade, A.N. and Carson, J.R. (1975). The effect of age of debeaking on future performance of White Leghorn pullets. *Poultry Science*, 54:666–674.

Appleby, M.D. (1993). Should cages for laying hens be banned or modified? *Animal Welfare*, 2(1):67–80.

Baxter, M. (1994). The welfare problems of laying hens in battery cages. *The Veterinary Record*, 134:614–619.

Davis, K.(2008). Prisoned Chickens: An Inside Look at the Modern Poultry Industry.

Gentle, M.J., Thorp, B.H. and Hughes, B.O. (1995). Anatomical consequences of partial beak amputation (beak trimming) in turkeys. *Research in Veterinary Science*, 58:158–162.

Glatz, P.C., Lunam, C.A., Barnett, J.L. and Jongman, E.C. (1998). Prevent chronic pain developing in layers subject to beak-trimming and re-trimming. A report to RIRDC, June.

Hughes, B.O. and Gentle, M.J. (1995). Beak trimming of poultry: its implications for welfare. *World's Poultry Science Journal*, 51:51–61.

Nicol, C.J. (2013). Welfare issues in commercial egg production. In Poultry Development Review (eds), FAO, Rome.

Rokade, J.J., and Gopi, M. (2017). Is beak trimming a welfare concern? Understanding its implications in poultry. In Bhanja, et.al., (2017) (eds). Stress and Welfare: Concepts and Strategies for Addressing Current Challenges in Poultry Production. ICAR Sponsored Summer School, 6–26 September 2017, ICAR-CARI, Izatnagar.

Savory, C.J. (1995). Feather pecking and cannibalism. *World's Poultry Science Journal*, 51:215–219.

---

## 11.9 SELF ASSESSMENT EXERCISES

---

- 1) Discuss the inter-relation between injurious pecking and beak-trimming.
- 2) Explain the economic and behavioural reasons for beak-trimming with examples.
- 3) Discuss different methods of beak-trimming with welfare concerns to poultry birds.
- 4) What are the alternative mechanisms for beak trimming?
- 5) Write the precautions to be taken to reduce pain and stress before, during and after beak-trimming.

---

## 11.10 ANSWERS / HINTS TO CHECK YOUR PROGRESS

---

### Check Your Progress 1

- 1) Beak trimming is the removal of one-quarter to one-third of the upper beak, or both upper and lower beak of a bird. For the majority of birds, it involves the partial removal of the upper and lower beak using an electrically heated blade.
- 2) Increase in cost of land and labour made deep litter system costly and cage system was introduced in the early 1920s. Due to less space and crowding,

poultry birds got fewer options for natural behaviours like scratching, dust bathing and started pecking each other leading to feather pecking and cannibalism. To prevent this, beak trimming practice was developed by farmers.

- 3) Farmers perform beak trimming due to economic and behavioural reasons, to decrease injuries caused by the behavioural bad habits, to avoid feed wastage, to avoid egg-eating vice and to reduce aggressive interaction among birds.

### Check Your Progress 2

- 1) The poultry birds that are normally beak-trimmed are: Laying hens, Turkeys, Broiler breeders, Quails and Ducks.
- 2) Broilers meant for meat are not normally beak-trimmed as they are marketed by 5-6 weeks before injurious pecking starts.
- 3) Different methods of beak trimming are heat blade method, cold method, electrical and infrared method.

### Check Your Progress 3

- 1) The normal functions of beak in poultry birds are: feed particle identification, exploration of the environment, preening and social defense.
- 2) The major welfare concerns are: removal of sensory receptors, acute and chronic pain which leads to reduction in feed intake, pecking efficiency and preferences, drinking ability. The other concerns are stress, beak damage, shorten and uneven beak.
- 3) Environment enriched cages with sufficient perch space, litter quality, good water and feed management improves welfare of birds by reducing aggressive behaviour and pecking. Dim white light plays important role in manipulating social behaviour of flock, which is the most useful method to prevent feather pecking and cannibalism.
- 4) The precautions before beak-trimming are: Administering vitamin K through drinking water 2 to 3 days before trimming can reduce bleeding and birds should not be subjected to stress from housing, vaccination or deworming during the week before or after trimming. The precautions during beak-trimming are: hold the bird in such a way that it neither shakes its head nor suffocates. The beaks are opened with the help of index finger and the tongue is held back and the upper beak is cut first to the recommended level. The precautions after beak-trimming are: feeders must be kept full with feed to help birds eat easily and administer Vitamins B-complex, C and K through water to reduce stress.