3.1 INTRODUCTION

Similar to each one of us having a name for identification, each animal has to be identified for the following reasons:

- identification of a particular animal for routine management and insurance;
- spotting and identifying of sick animal;
- recoding of each animal's milk production, breeding and health data; and
- effective culling of animals.

Note: In our country, most of the cattle owners do give a name to each of their cows and calves; the animals also appear to respond when they are called by those names.

Objectives

After performing this experiment, you should be able to:

- select the best identification technique for different livestock species; and
- perform different identification techniques like tattooing, tagging and branding.

3.2 EXPERIMENT

3.2.1 Principle

Any method you use for identifying farm animals should be:

a) visible, legible and readable from a distance;

b) permanent, easy to apply and painless while being applied; and

c) affordable (cheap).

The identification systems that are commonly used in cattle, buffaloes, sheep and goats are:
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1. **Tattooing**: The basic principle behind this method of identification is smearing the area to be tattooed with indelible (permanent) ink or dye followed by piercing (tattooing) the outlines of numbers or alphabets on the area (especially in the inner ear) by means of tattoos made up of brass or stainless steel. This method can be used very effectively in calves, sheep, goats, adult cattle and buffaloes. The main disadvantage is that the animal should be handled every time to read the number in the inner surface of the ear (see Fig 3.1 to 3.5).

2. **Tagging**: is done by piercing the ear with specific ear tags in which the number is present. There are two different types of tags viz. (a) Self-piercing tags and (b) Non-piercing tags. Self-piercing tags can be applied directly on to the ears, whereas, in case of non-piercing tags, a hole has to be made in the ear to apply the tag.

3. **Branding**: In this method, outline of numbers or alphabets are put (pressed) on the skin of animals (especially on the thigh, shoulder region, rump region) using red-hot iron (Hot iron branding) or caustic chemicals (Chemical branding) or by means of liquid nitrogen (Freeze branding or Cold branding). Hot iron branding and chemical branding causes severe pain and damages the skin.

### 3.2.2 Requirements

**a) For tattooing**
- An animal (Cattle/Sheep/Goat)
- Tattooing forceps with letters and numbers
- Indelible ink or dye
- Cotton
- Scissors
- Antiseptic solution
- White paper

**b) For tagging**
- An animal (Calves/Sheep/Goat)
- Tagging forceps
- Ear Tags (Metal or plastic with letter or numbers marked on them)
- Scissors

**c) For branding (Hot or Freeze)**
- An animal (Cattle)
- Branding iron containing different letters or numbers
- Heat source for heating the branding iron (or)
  - Liquid nitrogen for cooling the branding iron
- Scissors
- Antiseptic cream (for hot iron branding)
3.2.3 Procedure

A) Tattooing

1) Visit a livestock farm and identify an animal without an identification mark.

2) Approach, handle and restrain/secure the animal as per the method explained in Experiment No. 1 of this manual.

3) Clip the hairs in the inner side of the ear (area for tattooing) using scissors to remove unwanted hair which may affect the procedure. Clean the inner side of the area (to remove hair and dirt) so that the skin is clearly visible without any hair (Fig. 3.1).

4) Take the tattooing forceps and clean it thoroughly using an antiseptic solution (Fig. 3.2).

5) Arrange the desired combination of letters and or numbers on the tattooing forceps.

6) Test the sequence of numbers or letter by piercing it in a piece of white paper.

7) Apply the indelible ink or dye on the area to be tattooed (Fig. 3.3).

8) Place the tattooing forceps in inner side of the ears and press it completely by applying a little pressure so that the numbers gets stamped on the ear (Fig. 3.4). You should be very careful not to puncture the veins (blood vessels).

9) Clean the tattooed area using clean cotton to remove any blood coming from the punctured marks.

10) The wound heals in a week with a permanent mark on the ears (Fig. 3.5).

Fig 3.1: Cleaning and disinfecting the area  Fig 3.2: Disinfecting the applicator

Fig 3.3: Applying tattooing ink  Fig 3.4: Tattooing the ear with the applicator
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Fig 3.5: Final appearance of the tattooed ear
(Source: http://www.uaex.edu/Other_Areas/publications/PDF/FSA-4015.pdf)

B) Tagging

1) Visit a livestock farm and identify an animal without an identification mark.

2) Approach, handle and restrain/secure the animal as per the method explained in Experiment No. 1 of this manual.

3) Clip the area for tagging using scissors to remove unwanted hair which may affect the procedure. Clean the area (to remove hair and dirt) to be tagged so that the skin is clearly visible without any hair.

4) Take the tagging forceps and clean it thoroughly using an antiseptic solution.

5) Place the tag in the proper position on the tagging forceps.

6) Secure the ear properly, place the tagging forceps in the right position i.e. between the two main cartilage ribs of the ear and pierce the tag with a sudden force. You should be very careful not to puncture the veins (blood vessels).

7) Check whether the tag pierced properly on the ear (Fig 3.6).

Fig 3.6: Ear Tag in Cattle and Sheep

C) Hot or Freeze Branding

1) Visit a livestock farm and identify an animal without an identification mark.

2) Approach, handle and restrain/secure the animal as per the method explained in Experiment No. 1 of this manual.
3) Clip the area to be branded using scissors to remove unwanted hair which may affect the procedure. Clean the area (to remove hair and dirt) to be branded so that the skin is clearly visible without any hair. The most common site for branding is upper aspect of the hind quarter (left or right hip uniformly for all animals).

4) In case of hot iron branding, place the branding iron rod with specific letter or number on fire and allow it to become red hot. Place this hot red iron on the area to be branded (Fig. 3.7), press gently and then remove it so that partial burning of the skin produces a permanent mark. Liberally apply antiseptic cream on the burn.

![Fig 3.7: Hot iron branding](http://www.daff.gov.za/docs/Infopaks/Animalidentity.pdf)

5) In Freeze branding, follow the procedure from point number 1 to 3. Then, place the branding iron rod with specific letter or number in a container containing liquid nitrogen solution. Press the letter or number on the area to be branded for few seconds and then remove it. This form a dry scab on the skin that heals within a week and forms a permanent mark (see Fig 3.8 to 3.11).

![Fig 3.8: Shave and clean the area](Fig 3.8)  ![Fig 3.9: Disinfect the area](Fig 3.9)
3.2.4 Observations

Observe the behaviour of the animal before and after the identification procedure and note down your observations. Keep a constant watch on the animal for few days especially in case of hot or cold iron branding to avoid maggots (insect worms) infestation. Check and note down whether the identification procedure performed was proper or not.

3.2.5 Results

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3.3 PRECAUTIONS

- Approach and handle the animal properly as per the procedure.
- Apply the identification method gently, without causing too much pain or stress.
- After applying the specified identification mark, do not disturb the animal for sometime to avoid stress.
- Do not apply the iron rod with letter or number without properly heating (in hot iron branding) or without properly dipping in liquid nitrogen solution (in freeze branding).