# Artificial Insemination – Level1

## Unit of Competence: - Identify Reproductive Diseases and Other Abnormalities

## Module Title: - Identifying Reproductive Diseases and Other Abnormalities

# Learning Guide #12

**Unit of Competence: - Identify Reproductive Diseases and Other Abnormalities**

**Module Title: - Identifying Reproductive Diseases and Other Abnormalities**

**LG Code: AGR ATI1M 03 LO1- LG12**

**TTLM Code: AGR ATI1M 02 TTLM 0919v1**

## LO 1.Take appropriate measures to prevent reproductive diseases

| | |
|---|---|
| **Instruction Sheet** | **Learning Guide #12** |

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics –

- Checking and confirming Equipment's and materials for dairy animals treatment against work plan
- Mustering, Yarding , controlling, Inspecting and identifying Dairy animals for treatment
- Identifying House sanitation, feeding, Castrating, Dehorning, Branding Dairy animals
- Recognizing, assessing and controlling Existing OHS Hazards in work places
- Recognizing, assessing and controlling Existing OHS Hazards in work place

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, **you will be able to –**

- Check and confirm Equipment's and materials for dairy animals treatment against work plan
- Muster, Yard , control, Inspect and identify Dairy animals for treatment
- Identify, House sanitation, feeding, Castrating, Dehorning and Branding Dairy animals
- Recognize, assesse and control Existing OHS Hazards in work places

**Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 6.
3. Read the information written in the information "Sheet 1, Sheet 2, Sheet 3 and Sheet 4".
4. Accomplish the "Self-check 1, Self-check t 2, Self-check 3 and Self-check 4" **in page - 6, 9, 12 and 14** respectively.
5. If you earned a satisfactory evaluation from the "Self-check" proceed to "Operation Sheet 1, Operation Sheet 2 and Operation Sheet 3 " **in page -15.**
6. Do the "LAP test" **in page – 16** (if you are ready).

| **Information Sheet-1** | **Taking Appropriate measure to prevent Transmission of Zoonosis and Venereal diseases** |
|---|---|

**Introduction**

## 1.1 Taking Appropriate measure to prevent Transmission of Zoonosis and Venereal diseases

Diseases is the inability to perform routine activities if nutritional and environmental problem kept constant.

There are various types of disease among these some would be pastuerellosis, blackleg, anthrax, FMD, LSD, CBP, CCPP, Dermatophillosis tetanus etc.

**Zoonotic** diseases are diseases that transmit from animals to humans and vice versa or include only those infections where there is either a proof or a strong circumstantial evidence for transmission between animals and man. Some of them are:

- Rabies,
- Bovine Tuberculosis,
- Brucellosis,
- Toxoplasmosis,
- RVF,
- Cysticerccosis
- Hydatidosis etc.

The symptoms of ill looks the following during clinical observation

- Reduce appetite(anorexia)
- Appears non-bright, depressed and non-responsive when playing and climbing.
- Stands alone
- Has rough, dirty and nonshiny coat.
- Has a cloudy eye with some pale colour in the eyelids.
- Has an dropped tail an**d** a dry nose
- Increased body temperature,pulse ,heart
- Large sized lymphnodes

To address prevention and control of zoonotic diseases in the public, there is need for implementation of effective interventions.

The Awareness and educational programs in prevention and control of zoonotic diseases in the public takes places through use of various mass media like:

- Television
- Radio
- Internet
- video show
- leaflet and booklet distribution

**Billboard and signpost** should be done to meet individual cultural group and social economic status. Combination of these two interventions by any organisation, any country or even at global level would be of great help to prevention and control for zoonotic diseases, reduce the global burden of zoonoses and also promote the health of the general public. There can be high effectiveness in public health measures towards zoonotic diseases prevention and control, if educational programmes and awareness are included as part of the structured programme, especially when delivered together.

**Disease Control Measures**

**Control**: the reduction of the morbidity and mortality from diseases, and is a general term embracing all measures intended to interfere with the unrestrained occurrence of disease, whatever its cause.

**Methods of Control**

**1. Quarantine**:

- Is the isolation of animals that are either infected or suspected of being or non-infected animals that are at risk.
- Quarantine is used to isolate animals when they are imported from countries where exotic diseases are endemic. in this case suspected animals are isolated until infection is either confirmed or discounted.

**2. Creation of unfavourable environment:** this may be related to the livestock or the environment.

**3. Disinfection-** it involves the destruction of pathogenic organisms on inanimate objects, usually by physical or chemical means. All disinfectants are effective against the vegetative forms of organisms but not necessarily against the spore form of the organisms.

**4. Immunization**: It is the process by which antibody produced or administered for the prevention or treatment of disease. Generally, there are two types of immunity.

A. **Natural immunity** - It is attributed to antibodies present or appearing without obvious external stimulus.

B. **Acquired immunity**- is that which an animal develops or receives at any time after birth.

- **Active immunization**-follow actual injection and, also artificial stimulation with living or attenuated microorganisms, dead organisms or their components or products.
- **Passive immunization**- is the result of natural transfer of antibodies from the mother to the foetus or new born animal or the injection of antitoxins and other

5. Denial of access of the disease agent to susceptible host animals
6. Avoiding contact between infected and susceptible animals
7. Removing infected and potentially infected animal
8. Reducing the number of susceptible animals
9. Reducing access of vectors to susceptible animals

| Self-Check -1 | Written Test |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**I. Choose the best answer (each 1point)**

1._____is the inability to perform routine activities if nutritional and environmental problem kept constant.

A. Zoonotic diseases B. Bovine Tuberculosis **C. Diseases** D Rabies

2. ____are diseases that transmitted from Animal to Human and vice versa.

A. **Zoonotic diseases** B.FMD C. Diseases D None

3. Which one of the following are/is the symptoms of **ill animals**

A.R educe appetite (anorexia) B. Increased body temperature, pulse, heart

C. Has rough, dirty and non-shiny coat. **E. All**

D. Increased body temperature, pulse, heart

4. From the Acquiring immunity system, which one is/ are practiced by actual injection and artificial stimulation with live or attenuated microorganism?

A. Passive immunization C. Disinfection

B. **Active immunization** D. Quarantine

5. _____Identify diseases controlling Method practiced by isolating animal.

A. Immunization **B. Quarantine** C**.** Natural immunity D. Acquired immunity

**II. Answer the following question!**

1. Mention the methods of Animal diseases controlling Methods! (4points)

_____,_____,_____,_____

2. List down at least six zoonotic diseases (6point)

_____,_____,_____,_____

***Note:*** **Satisfactory rating - 8 and 15 points** **Unsatisfactory - below 8and 15points**

You can ask you teacher for the copy of the correct answers.

Score = _____

Rating: _____

**Answer Sheet**

Name: _____ Date: _____

**Short Answer Question**

| **Information Sheet-2** | **Distinguishing sings of infertility** |
|---|---|

**1.2 Distinguishing sings of infertility**

Reproductive problems in dairy cattle are observed by the dairy farmer as **infertility** (problem cows that do not become pregnant), abortions and birth of still-born or deformed calves. Non-visible reproductive problems such as increase in the calving to first heat interval and unapparent heat cycles are becoming a bigger problem in high producing and seasonal herds.

**Infertility:** Indicates a degree of reduced fertility, which results in failure to produce or delay in producing the annual live calf.

Infertility interfere with the move from one generation to the other.

Infertility has effect on efficient production of milk since pregnancy and parturition are necessary for the initiation and maintenance of lactation in the species.

**Classification: -**

Based on affected Parts infertility can be classified in: -

a) Anatomical disorders
b) Physiological (Functional) disturbance
c) Management disturbance
d) Reproductive diseases

**A. Anatomical or Congenital disorders**

1. Ovarian agenesis
2. Ovarian hypoplasia
3. Segmental aplasia of the Mullerian ducts
4. Freemartin

**B. Functional disturbances**

1. Anestrus
2. Cystic ovarian disease (COD)
3. Persistent corpus luteum
4. Embryonic mortality
5. Delayed Ovulation

6. Infantilism
7. Repeated Breeding
8. Abortion
9. Retained placenta
10. Uterine infection in post-partum cows
11. Heat stress and its effect on reproduction
12. Heat stress
13. Nutrition and reproduction disorder
14. Infectious diseases
15. irregular estrus :
    - Very short estrus<18 days.
    - Very long estrus >24 days.

**C. Management factors:**

1. **Holding cow open too long**, low breeding efficiency.
2. **Breeding too soon**. It is recommended that cows should not be bred until 60 days after calving. These 60 days are needed for the uterus to come to its normal condition.
3. **Time to breed**

- Incorrect time of insemination reduces fertility
- The best time of insemination is 10 -11 hours after ovulation.

4. **Poor nutrition**

- Energy and protein intake
- Vitamin deficiency such as A and D.
- Mineral deficiency such as P.

5. **Silent estrus** - Animal has estrus but doesn't show signs

**Reproductive diseases of cattle associated to reproduction disorders.**

- Reproductive diseases are diseases that interfere with the reproductive function of male and female animals
- This interference is expressed in the form of reduced or total absence of fertility.

- It can affect individual animal or the herd, the entire population.
- In male animals, this reproductive disturbance can affect the sexual behavior and the ability to impregnate.

Reproductive diseases can be divided into **four** general classifications:

1. **True venereal** diseases transmitted by sexual contact;
2. **Infections** that specifically attack the reproductive system;
3. **Inflammatio**n of specific organs caused by various agents;
4. **Debilitating** disease that lowers efficiency of all the body systems.

**1. The cause of these reproductive diseases** are:

- Nutritional mismanagement
- Management in general
- Genetically factors
- Infectious diseases

**2. Diseases spread by semen**

Semen has great potential for spreading infectious diseases

Semen can be infected from:-

- ✓ Testes
- ✓ Accessory sex organs
- ✓ Preputium
- ✓ Circulatory system
- ✓ Tissue fluids entering urogenital system
- ✓ Microorganisms in the atmosphere
- ✓ Teaser animal
- ✓ Unsterilized equipment

**3.The most important diseases spread by semen** are

1. Brucellosis
2. Vibrio –Comply- bacteria's
3. Trichomonas's
4. Tuberculosis

5. Leptospirosis
6. Para tuberculosis
7. Blue tongue
8. IBR / IPV
9. BVD
10. Enzootic bovine leucosis

| Self-Check -2 | Written Test |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**I. Choose the best answer (each 1point)**

1. Which one is/are the causes of anatomical or congenital disorders infertile of animals?
   A. Ovarian agenesis
   B. Ovarian hypoplasia
   C. Segmental aplasia of the Mullerian ducts
   D. Freemartin
   **E. All**

2. Based on the on affected part which one of the following is/ are not the classification of infertile in animals?
   A. Anatomical disorder
   B. Physiological (Functional) disturbance
   C. Management disturbance
   D. Reproductive diseases
   **E. None**

3. Which one of the following are/is not management factor of animals inutility?
   A. Holding cow open too long
   B. Breeding too soon
   C. Poor nutrition
   **D. Ovarian agenesis**
   E. Silent estrus

4. Which one of the following is/are **not** the causes of reproductive diseases?
   A. Nutritional mismanagement

B. Management in general

C. Genetically factors

D. Infectious diseases

**E. Time to breed**

5. ___is the indication of reduced infertility or failure to produce or delay in producing the annual live calf.

A. Diseases C**. Infertility**

B. Quarantine D. Zoonosis

**II. Answer the following question!**

1. Write the causes functional disturbances for irregular estruses of dairy animals! (2point)_____,_____

2. List down the most important diseases spread by semen! (4point)

_____

_____

_____

3. List down the major causes of these reproductive diseases. (4point)

_____,_____

***Note:*** **Satisfactory rating – 8 and 15points** **Unsatisfactory - below 8 and 15points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____ Date: _____

**Short Answer Question**

| | |
|---|---|
| **Information Sheet-3** | **Providing Advice to the beneficiaries** |

### 1.3 Providing Advice to the beneficiaries

Taking good care of animal health does not only mean treating an animal when it is sick. It also means helping the animal to avoid becoming ill.

**Disease prevention**

General preventive measures are:

- Hygiene. Cleaning and disinfecting.
- Water. Always ensure free access to clean and fresh water.
- Good feed and regular feeding.
- Shelter for protection against bad weather (rain, wind and cold, or intensive sunshine).
- A peaceful environment (avoid unrest and stress).
- Quarantine.
- Vaccinations.
- Worm prevention: i.e. Tick control
- Disposal of a dead animal

| **Information Sheet-4** | **Recognizing, Risk assessing, Controlling existing and potential Hazards** |
|---|---|

### 1.4. Recognizing, Risk assessing, Controlling existing and potential Hazards

**1.4.1 Recognized and Assessed risk OHS hazards during artificial breeding include**:

- Solar radiation
- Soil-born micro organisms
- Manual handling
- Aggressive Cows/ Animals
- Slippery and uneven surfaces
- Handling materials and tools e.g. sharp materials
- Zoonotic diseases

**Biohazard**

- Introduction of pathogens and Contaminants
- Microbial and parasitic infections on pastures and paddocks
- Microbial load on skins
- Airborne infections and contaminations
- Carrier animals shedding pathogens
- Increased susceptibility to pathogens

**Chemical Hazards**

- Chemical contamination of environment, feed and water
- Toxins of biological origin (plants, fungi, algae)
- Residues of veterinary medicines and biologicals (incl. medicated feed and water)

**Physical Hazards**

- Broken needles and other penetrating objects
- Injuries

**1.4.2. Controlling existing and potential Hazards by**:

- Safe livestock handling systems and procedures including zoonoses control, identify hazards, assess and report risks, safe manual handling (including lifting) systems and procedures.
- Safe systems and procedures for the application and storage of hazardous substances (drenches, vaccines)
- Handling of veterinary equipment (syringes, needles, vaccines).
- Safe systems and procedures for outdoor work including protection from solar radiation
- Ensure that people working with animals are properly experienced and trained for the tasks they should perform
- Ensure that facilities and equipment are properly designed and maintained to prevent physical injury
- Ensure that animals are handled and transported appropriately
- Appropriate use of personal protective equipment.

### 1.4.3. Using Personal protective equipment

PPE must be selected, checked and used according, to supervisor instruction. In order to overcome different problems including OHS hazards and zoonosis PPE have to use properly. PPE include:

1. Steel caped boots/ shoes
2. Over alls
3. Gloves
4. Sun hat
5. Screen lotion
6. Face mask
7. Boots

| Self-Check -3 | Written Test |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. List down the **OHS** Hazards during Artificial insemination! (3point)

_____,_____,_____

_____,_____,_____

2. List down the Biological OHS Hazards during Artificial insemination! (4point)

_____,_____,_____

_____,_____,_____

3. List down the chemical OHS Hazards during Artificial insemination! (3point)

_____,_____

***Note:*** **Satisfactory rating - 6and 10points** **Unsatisfactory - below 6and 10points**

You can ask you teacher for the copy of the correct answers.

Score = _____
Rating: _____

**Answer Sheet**

Name: _____ Date: _____

**Short Answer Question**

## Artificial Insemination – Level1

# Learning Guide #13

**Unit of Competence: - Identify Reproductive Diseases and Other Abnormalities**

**Module Title: - Identifying Reproductive Diseases and Other Abnormalities**

**LG Code: AGR ATI1M 03 LO2- LG13**

**TTLM Code: AGR ATI1M 02 TTLM 0919v1**

## LO2. Record data and clean up on completion of work

| | |
|---|---|
| **Instruction Sheet** | **Learning Guide #13** |

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics –

- Keeping and reporting observed sings of disease infertility
- Disposing waste according to hygiene standards

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, **you will be able to**

- Keep and report observed sings of disease infertility
- Dispose waste according to hygiene standards

**Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 6.
3. Read the information written in the information "Sheet 1, Sheet 2, Sheet 3 and Sheet 4".
4. Accomplish the "Self-check 1, Self-check t 2, Self-check 3 and Self-check 4" **in page - 6, 9, 12 and 14** respectively.
5. If you earned a satisfactory evaluation from the "Self-check" proceed to "Operation Sheet 1, Operation Sheet 2 and Operation Sheet 3 " **in page -15.**
6. Do the "LAP test" **in page – 16** (if you are ready).

| **Information Sheet-1** | **Keeping and reporting observed sings of disease infertility**<br>**Record keeping** |
|---|---|

## 2.1 Keeping and reporting observed sings of disease infertility

### Record keeping

When a problem arises in an enterprise, be it a disease, a chemical hazard issue or a physical safety matter, record keeping is central to any effort to trace the source of the problem and eliminate it.

Hence, as far as practicable, farmers should keep records of:

- All animal populations on the farm (groups or individuals as relevant).
- All animal arrivals, including their identification marks or devices, origin and date of arrival, to ensure that movements of incoming animals are traceable to their source.

- Movements of animals around the enterprise.
- Changes to feeding or health regimes, and any other management changes that may occur.
- Origin and use of all feeds, drugs, disinfectants, herbicides and other consumable items used on the farm.
- Known diseases/infections, diseased/infected animals and mortalities, as far as possible giving details such as dates, diagnoses (where known), animals affected, treatments and results

**Keeping and reporting record**

Record keeping is an important activity that must be carried out in livestock production activity. The record should kept all necessary information and report to the concerning body on time. Under this course of study some important thing that should kept may includes:

- Causes of disease
- Signs of disease
- Vaccines taken
- Treatment or medications and other health management related activities.

**History sheet of recording** or the most **important information** that should be kept in breeding records includes:

- Cow ear no
- Brand no
- Cost of purchase
- Price of disposal
- Sire no
- Milk yield
- Body weight
- Vaccination
- Treatment

- **Recording system** should satisfy the following criteria.

- ✓ System must be simple
- ✓ Only economically important traits should be recorded e.g. milk yield, weight, sex of calf etc.
- ✓ Efficient in terms of time and cost

| Table. Cow Identification and Health Card | | | | | | |
|---|---|---|---|---|---|---|
| Cow identification | | | Health record | | Courses of infertility | |
| Cow name ID No_____ | Sire | Dam | Date Born | Illness/Event | | Outcome |
| Number | | Number | | | | |
| Breed | | Breed | | | | |
| Birth date | | Sire name | | | | |
| Date animal received | | Number | | | | |
| Source | | Breed | | | | |

| **Information Sheet-2** | **Disposing wastes according to recommended hygiene standards** |
|---|---|

## 2.2. Disposing wastes according to recommended hygiene standards

### 2.2.1 Hygiene and disease prevention

Measures aimed at preserving cleanliness, preventing pathogen build-up and breaking possible pathways of transmission are essential in the management of any modern farming enterprise, regardless of the species or the farming system.

While the use of animal manure, animal **slurry** and human **sewage sludge** for fertiliser purposes is becoming increasingly common, enabling higher crop yields as well as sensible waste management, it may facilitate the transmission of food-safety-related

diseases within or between herds or directly to humans. Therefore, systems for animal or human waste usage for fertiliser purposes should take into consideration relevant treatment methods as well as specific holding times before animals are allowed onto treated pastures.

Suggested holding times are directly related to climatic conditions in the region in question (e.g. die-off of pathogens is faster at higher temperatures).

As general rule, neither animal nor human waste should be used on plants intended for direct human consumption unless it has been appropriately treated.

**Precautions should aim at:**

- ✓ Reducing contact between healthy animals and potentially infected animals.
- ✓ Maintaining the hygiene and safety of all facilities.
- ✓ Ensuring the health of all workers on the farm and the implementation of hygienic working procedures.
- ✓ Taking all appropriate measures to prevent contamination by vehicles entering and traversing the property.
- ✓ Minimising contact between livestock and professional or other visitors, and taking all hygienic measures necessary to reduce the possible introduction of pathogens and contaminants.
- ✓ Ensuring overall health of livestock through good nutrition and reducing stress.
- ✓ Maintaining an appropriate population density for the species and age group in question, either by following locally enforceable measures or by obtaining appropriate advice from recognised experts.
- ✓ Keeping records of animal populations in facilities/on farms**.**

### 2.2.2 Cleaning of equipment's and removing of dairy residues

**1. Cleaning equipment and returning to store**

Cleaning refers to removal of matter from a surface on which it is not acceptable. Soil surface should be contact with a cleaning agent for adequate time and sufficient pressure

should be applied. if required, to remove the soil. Cleaning involves two steps: wash step and rinse (solution) step. Equipment should be carefully selected and, washed, and maintained before they can be sanitized.

**2. Sanitizing** is the processes of destruction of microorganisms on surface after washing and rinsing.

The purpose of sanitizing is to reduce the microbial count to a safe level. It achieved through heat and application of chemical compounds.

Both cleaning and sanitizing from the basis of livestock production service sanitation and their purposes are:

A). Reduce health hazards by avoiding contamination

B). Prevent the spread of diseases, and food & water contamination,

C). Control abnormal odors, and

D). Create conducive environmental conditions.

**Water** is important in the cleaning process. It dissolves detergents, sanitizes and activates them. According to **Roday** (1999) a good **sanitizer** should have the following properties.

- Toxic to micro-organisms,
- None corrosive,
- Water soluble,
- Deoderizind,
- Doesn't impart odor or taste,
- Doesn't react with food,
- Effective,
- Easily rinsing,
- Easily available, and
- Reasonably price

**3. Method of Cleaning**:

A. **Manual**: - removal of soil by scrubbing in the presence of detergent solution.
B. **Applying Low-pressure High volume Spry**: - the application of water or detergent solution in large volume at low pressure.
C. **High Pressure Low volume Spry**: - application of water and detergent solution low volume at high pressure.
D. **Foam Cleaning**: - the application of detergent in the form of foam.

The foam allowed to react for **15- to-20 minutes** and then rinsed off with water spray.

### 2.2.3 Waste management

After completing treating dairy animals

- Clean
- Disinfect
- Dry
- Keep in appropriate places
- Removing litter and droppings frequently
- Burn sweepings and scrapings
- Dispose of manure, feed wastes and other excreta twice daily and keep manure pit covered with straw to prevent breeding place of flies.
- Use animal dung's for energy source(biogas)

### 2.2.4 Handling waste materials

One of waste material in the livestock farm is manure of the animal, So this waste product have to be removed from our farm in different way.

Main objective of manure handling is to prevent surface and ground water pollution. Biological and chemical treatments of animal wastes are too expensive for farmers to use. Generally, the wastes must be held in some way until they can be properly disposed of on the land.

**Selecting a system Of Manure Handling**

An animal feeding operation refers to facilities that house livestock for production purposes. The Environmental Protection Agency (EPA) specifies the conditions and/or factors that must be taken in to account when planning and selecting Livestock waste handling systems. This includes:

- Kind of animals being raised,
- Kind of housing and management
- Sizes and types of feeding operation,
- Climate,
- The sizes of farm and characteristics,
- Regulations like Federal, State, & local laws

Animal manure collected and handled as a solid, and/or liquid. If the manure is handled as a solid, then bedding may also be handled with the manure. Liquid systems generally can not handle bedding: however, newspaper bedding usually breaks down completely enough to be useable with this system. Flushing systems add to the amount of water in the raw manure.

Solid system uses several types of floors, depending on the way in which the manure is to be handled. Housing that uses a solid system may have concert floors, dirt floors, slotted floors, or solid floors with gutters. Those buildings with liquid systems may use solid concrete floors that are flushed with water. Slotted floors are also used with liquid.
Liquid system use pits, lagoons, or storage basins for storing and handling manure. Pits are pumped out & the manure is spread on the liquid in the farm. Storage basins may be above or below the ground. Above ground system is more expensive to build than underground basins so that the manure can be hauled to the field.

Every waste material must be handled in a safe manner and avoided from farm area as soon as possible.
The major waste materials include:

- Broken rearing and farm items

- Plant debris
- Plastic, metal and paper-based materials
- Dung of the animal
- Urine of the animal

There are different ways of avoiding those waste materials from our farm area.

- The first way is recycling that waste material in a usable form.

For example, that of dung and urine of the animal can be used as fertilizer for crop Production and as source of power by constructing **biogas tank**

- The second way is that of returning waste material such as old iron, thin, metal and plastic to manufacturers.
- The third way is that of re using waste material(biogas, fertilizer/compost)

| Self-Check -1 | Written Test |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Write the two-step involved in equipment cleaning! (2point

_____and_____

2._____ is the processes of destruction of microorganisms on surface after washing and rinsing (2point)

3. What are the purpose and service of cleaning and sanitizing for livestock production? (4point)_____,_____,_____

_____,_____,_____

4. What are the methods of cleaning? (4point)

_____,_____

_____,_____

4. List down the OHS Hazards during Artificial insemination! (3point)

_____,_____,_____

_____,_____,_____

5. How you manage waste material after you completing dairy animal treatment? (4point

_____,_____,_____

_____,_____,_____

6. _____ is the waste material in livestock production. (1 point)

7. What the major waste material of lovesick production? (3point)

_____,_____,_____

_____,_____,_____

8. Sanitization achieved through application of _____and_____2point)

***Note:*** **Satisfactory rating - 13and 25 points** **Unsatisfactory - below 13 and 25points**

You can ask you teacher for the copy of the correct answers.

**Answer Shee**

| |
|---|
| Score = _____ |
| Rating: _____ |

**$LO_1$:-prepare for Artificial Insemination work**

Operation title: -**preparing for Artificial Insemination work**

| | |
|---|---|
| Purpose | To acquire the trainees with different equipment, tools and materials helps for artificial insemination work. |

| | |
|---|---|
| Equipment ,tools and materials | Supplies and equipment needed or useful for AI programs include these:<br>➢ Bull semen<br>➢ Semen storage tank<br>➢ Liquid nitrogen<br>➢ Electronic thawing device or insulated water bath<br>➢ Thermometer<br>➢ Timer<br>➢ Straw-cutting device<br>➢ Insemination rod<br>➢ Plastic sheaths<br>➢ Plastic obstetrical sleeves<br>➢ Obstetrical lubricant<br>➢ Paper towels<br>➢ Record-keeping supplies<br>➢ Cattle handling facilities (including breeding box or squeeze chute with head catch and palpation cage<br>➢ Protection from weather |
| Conditions or situations for the operations | • All tools, equipment's and materials should be available on time when required.<br>• Appropriate site with artificial insemination facilities' and equipment should be adjusted for inseminating the female animal. |
| Procedures | 1. Wear personal protective clothes.<br>2. Identify materials, tools and equipment's helps for insemination.<br>3. Check weather all materials and equipment's are properly work or not.<br>4. Follow correct handling of tools and equipment's.<br>5. Prepare and list the role of tools and equipment's used for insemination. |
| Precautions | ❖ Care should be taken while preparing materials, tools and equipment's.<br>❖ Preparing materials, tools and equipment are according to inseminator command. |
| Quality criteria | ✓ Did PPE wear properly?<br>✓ Did materials and tools are identified properly?<br>✓ Did all materials and tools are checked properly and accordingly?<br>✓ Did all materials are listed correctly and match with work? |

## Basic Agricultural Practices and Natural Resources Conservation

| | |
|---|---|
| **LAP Test** | Practical Demonstration |

Name: _____ Date: _____

Time started: _____ Time finished: _____

***Instructions:***

1. You are required to perform any of the following:
   1.1. Identify AI equipment
   1.2. Prepare animal for insemination

2. Request your teacher for evaluation and feed

| **Information Sheet-3** | **Maintaining a clean and safe work site** |
|---|---|

**1.2 Maintaining a clean and safe work site**

**S**uccess in insemination timing is dependent up on :

- Good heat detection program. In large herds, this means assigning individual responsibility for heat detection and a continued education program for labor.
- A successful heat detection program and subsequent proper timing of insemination will pay dividends in increasing reproductive efficiency.

| Self-check 3 | Unit of competence | Clean up on completion of AI work |
|---|---|---|
| | Module title | Cleaning up on completion of AI work |

Answer the following questions

1. Which type of waste materials are disposed?
2. Why we clean and maintain materials, tools and equipment's?
3. What it means safe work site while working

**Operation sheet 3**

Operation title: - **Cleaning up on completion of AI work**

| Purpose | To acquire the trainees with proper Cleaning up on completion of AI work. |
|---|---|
| Equipment ,tools and materials | -straw-cutting device<br>- insemination rod |

| | |
|---|---|
| | - plastic sheaths<br>-plastic obstetrical sleeves<br>- semen storage tank |
| Conditions or situations for the operations | -All materials should be Clean up on completion of AI work.<br>-Rearrange accordingly.<br>-Store properly |
| Procedures | 1. Wear personal protective clothes.<br>2. Prepare cleaning and/or disinfect things.<br>3. Preparing already worked equipment, tools and materials.<br>4. Clean properly and dispose Waste materials produced during work.<br>5 .Dry them.<br>6. Store pro perly.<br>7. Properly Store PPE. |
| Precautions | Care should be taken while Cleaning up on completion of AI work. |
| Quality criteria | -Did PPE wear properly?<br>-Did materials checked before Clean?<br>-Did Clean properly and disposed Waste materials?<br>-Did Animals, materials and tools are cleaned and maintained? |