

JOB ROLE – ANIMAL HEALTH WORKER

Sector – Agriculture

(Qualification Pack Code: Ref.Id.AGR/Q4804)

Class X



PSS Central Institute of Vocational Education
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UNIT 1: ASSISTING IN VETERINARY EXTENSION SERVICES

Session 1: Promotion of Technologies and Good Practices in Livestock Farming

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Session Objectives

The student will be able to :

- Describe the various technologies and practices such as farm practices, feed and feeding, disease prevention, farming system and animal waste utilization for enhancing the productivity and profitability of livestock farming .

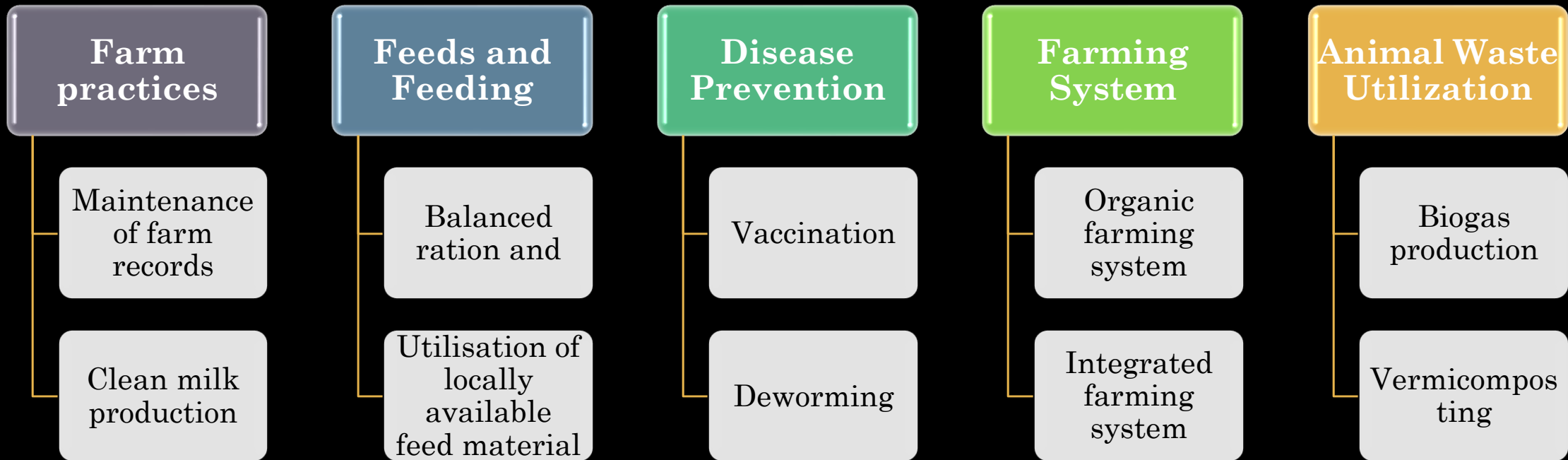
Introduction

In India, livestock are reared mostly under traditional farming system whereas the world has greatly benefitted by adopting advancements in:

1. Feeds and feeding of animals,
2. Prevention of diseases in animals,
3. Adoption of advanced farming systems,
4. Optimum utilization of animal and disposal of farm wastes.

Technologies and Practices for Enhancement of Productivity and Profitability of livestock farming

Various technologies and practices for enhancement of productivity and profitability are:



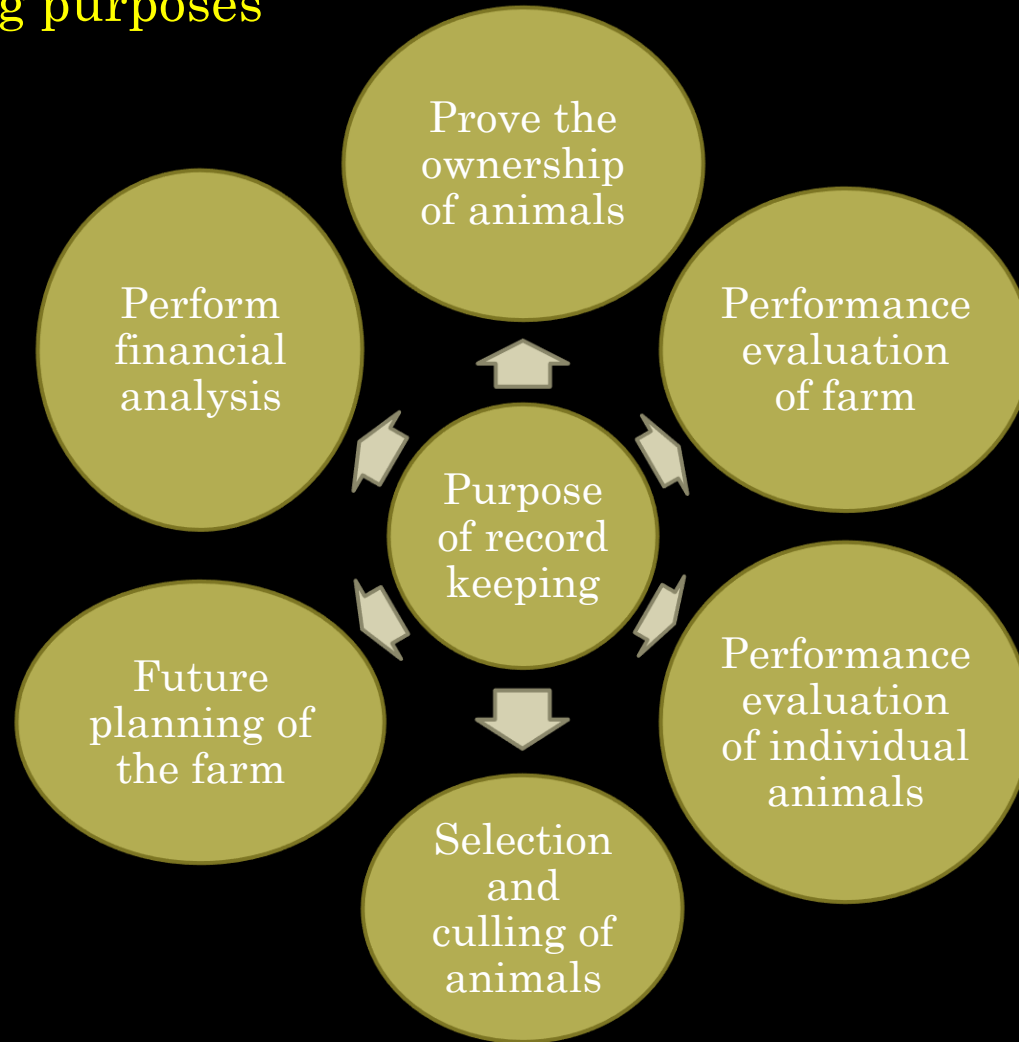
Technologies and Practices for Enhancement of Productivity and Profitability (continued...)

1. Farm practices: Maintenance of farm records, Clean milk production
2. Feeds and feeding:
Balanced ration utilization of locally available feed material
3. Disease prevention : Vaccination
Deworming
4. Farming systems :
Organic farming system
Integrated farming system
5. Animal waste utilization: Biogas production Vermicomposting

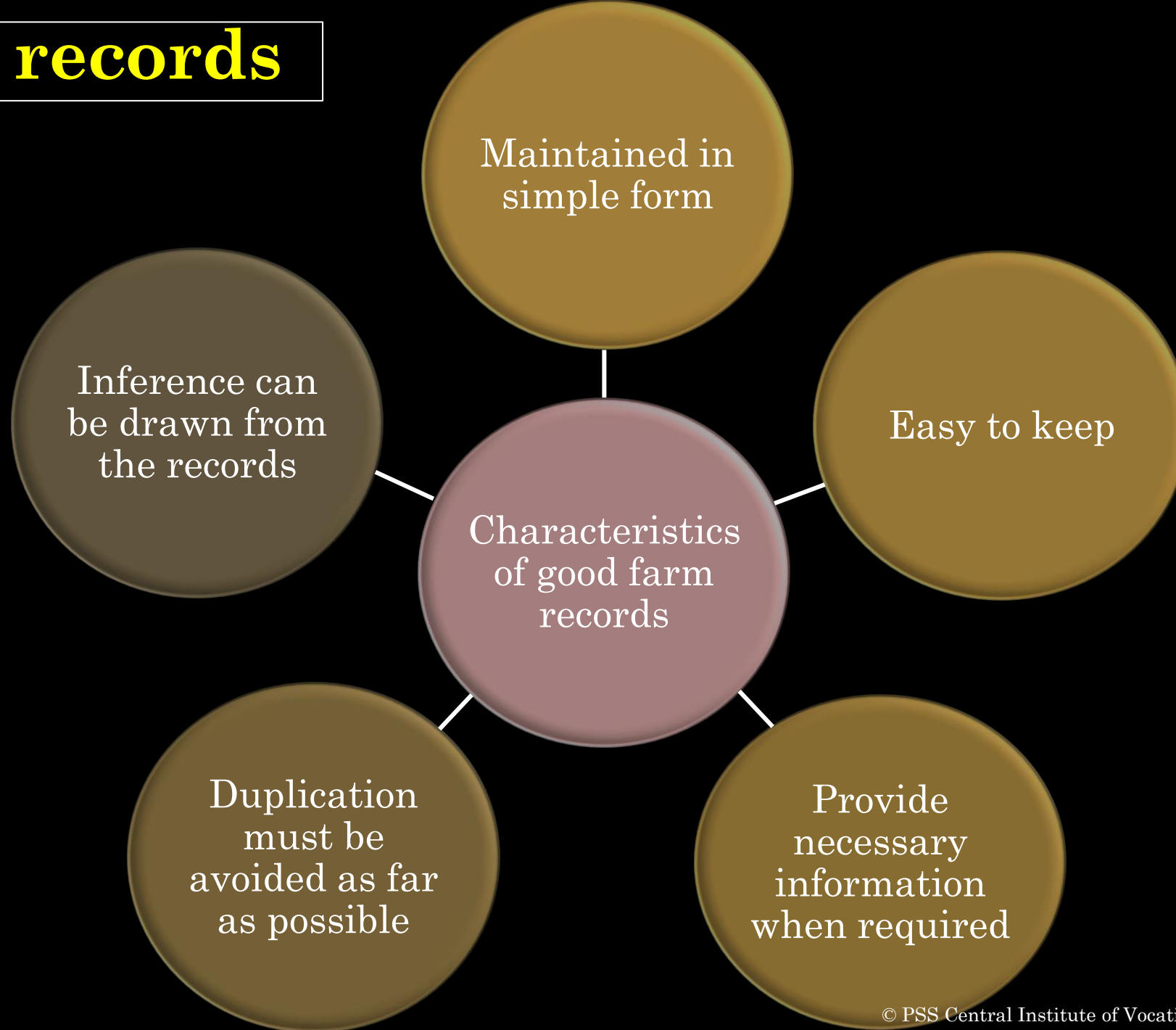
1. Farm Practices :

i. Maintenance of farm records

Maintenance of farm records is one of the most important part of livestock management and serves the following purposes



Farm records



Types of farm record

Technical records

- Daily report register
- Artificial insemination register or service
- Calving register
- Daily milk yield register
- Feed stock register
- Feeding records
- Health records

Farm section records

- Fodder cultivation register
- Field register
- Labor register
- Muster roll
- Tractor logbook
- Machinery and equipment book

Financial records

- Store stock book
- Attendance and pay record
- Feed cost record
- Veterinary expenses
- Cost of fodder seeds
- Equipment purchases

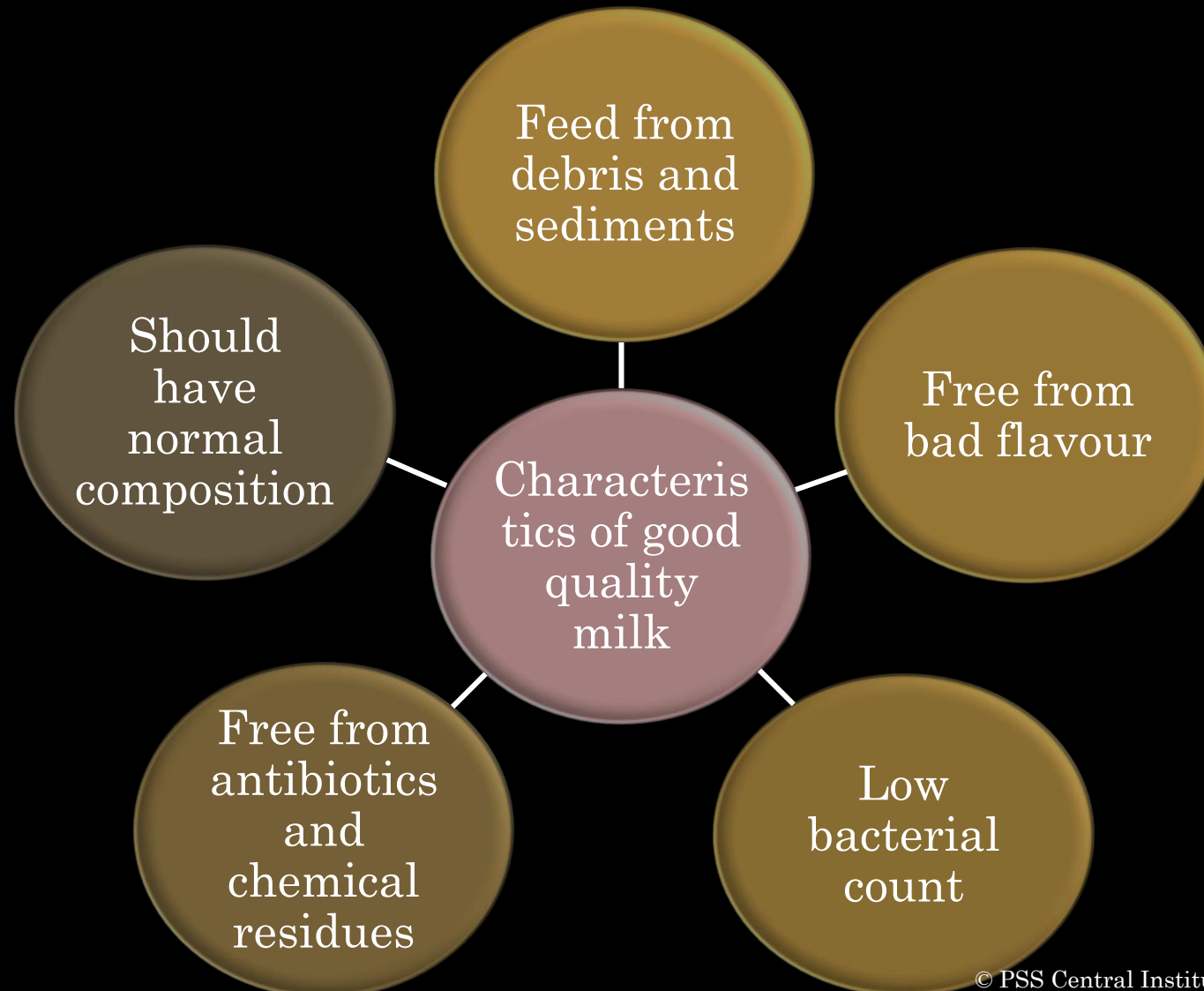
ii. Clean Milk Production

Techniques of clean milk production

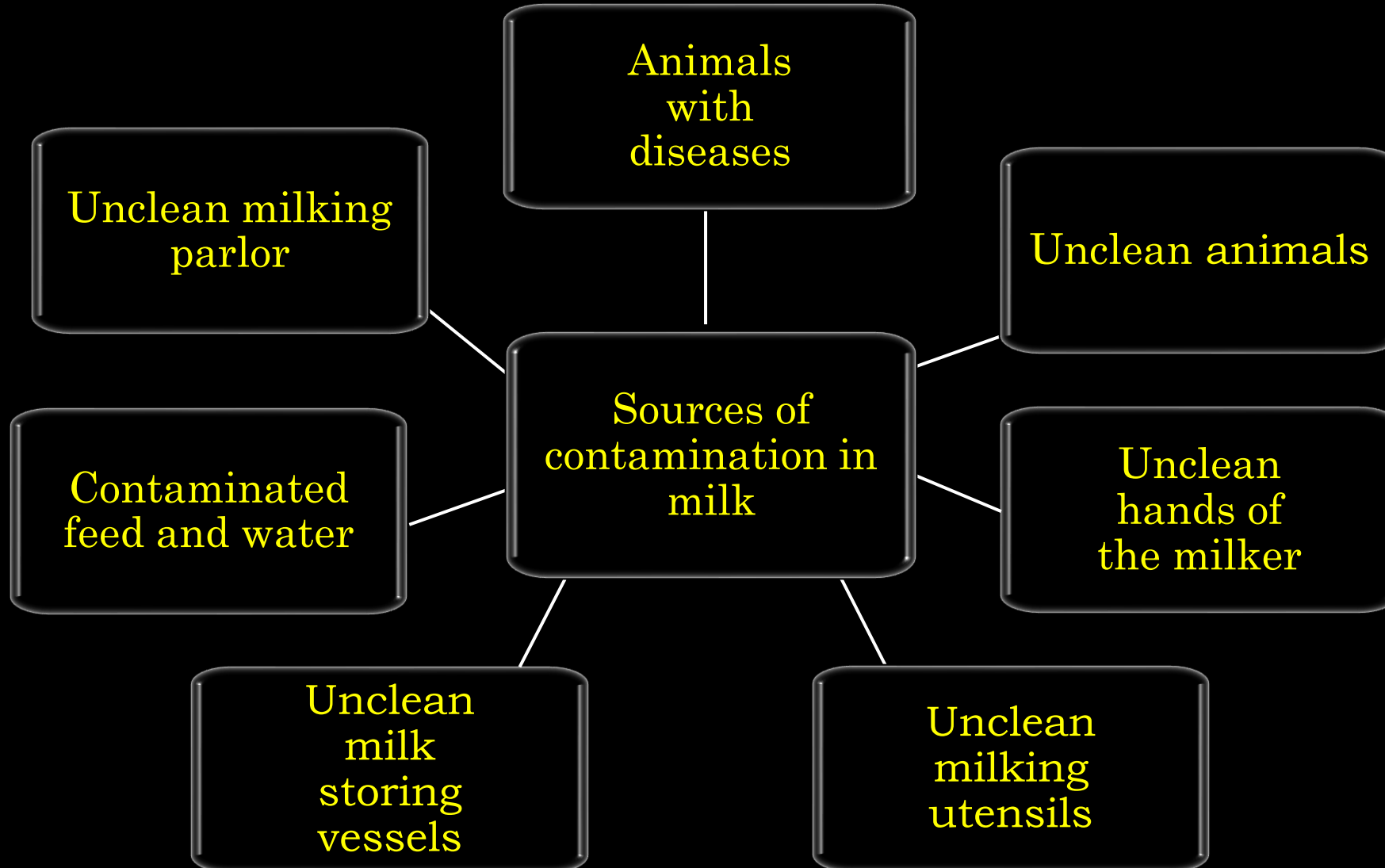
Clean milk is defined as milk drawn from the udder of healthy dairy animals, collected in clean milking pails, and free from unwanted objects like dust, dirt, flies, manure, etc.

Clean milk has a normal composition, possesses a natural flavor and is safe for human consumption.

Characteristics of good quality milk



Sources of contamination in milk



Reasons for clean milk production

Required for the production of dairy products

Safe for human consumption

Transportation of raw milk over long distance.

Higher market value of milk

2. Feeds and feeding :

i. Balanced ration and utilization of locally available feed material:

- A ration is the amount of feed an animal receives for consumption in a 24-hour period.
- A ration is balanced when it contains all the essential nutrients needed by an animal in the right proportions

Benefits of balanced ration



3. Disease Prevention

i. Vaccination

- Vaccines consist of killed or weakened microbes that stimulate an animal's immune system.
- When injected into the animal, these microbes do not produce that particular disease. Instead, their presence in the animal's body naturally starts boosting the animal's immune system.

Vaccine	Primary Vaccination	Booster	Re-Vaccination
Foot and Mouth Disease (FMD)	4 months of age and above	6 months after first dose	Biannual
Hemorrhagic Septicemia (HC)	6 months of age and above	Annual
Black Quarter (BQ)	6 months of age and above	Annual
Anthrax	6 months of age and above	Annual
Brucella (once in a lifetime)	4-8 months of age only in female calves	

ii. Parasite Control

Parasite control programme mainly focuses on two areas:

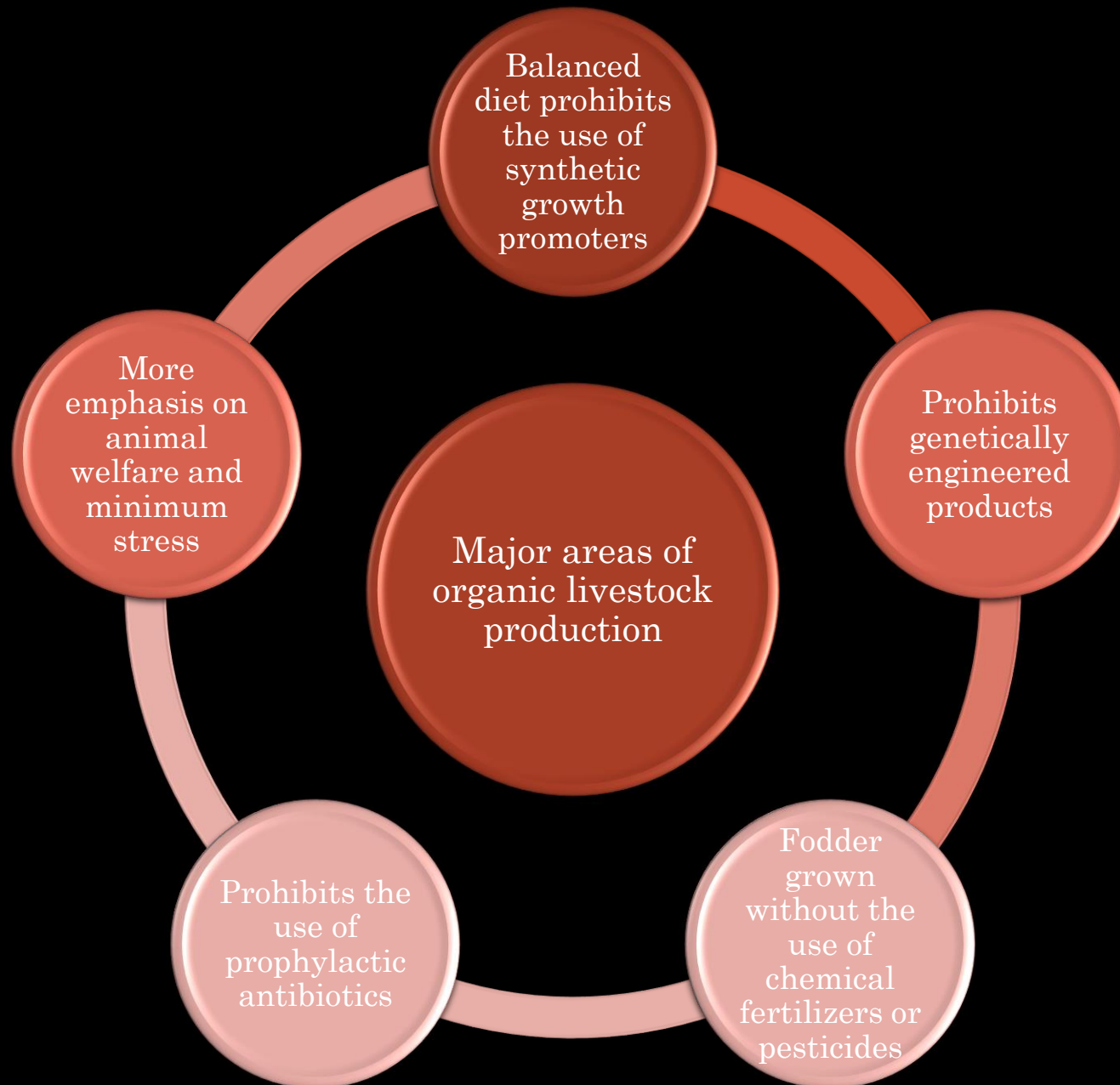
- a) control of ecto-parasites (external parasites)
- b) control of endo-parasites (internal parasites)



4. Farming Systems

i. Organic Livestock Farming :

- It is a system of livestock production that promotes the use of organic and biodegradable inputs from the ecosystem in all areas of animal production
- It promotes natural breeding methods, minimize stress, prevent diseases and avoids allopathic veterinary



Different Stages in organic livestock production

Soil Fertilization

- Application of farmyard manure
- Application of vermicompost

Fodder Production

- Proper crop rotation
- Use of seeds free from chemical treatments

Rearing Animals

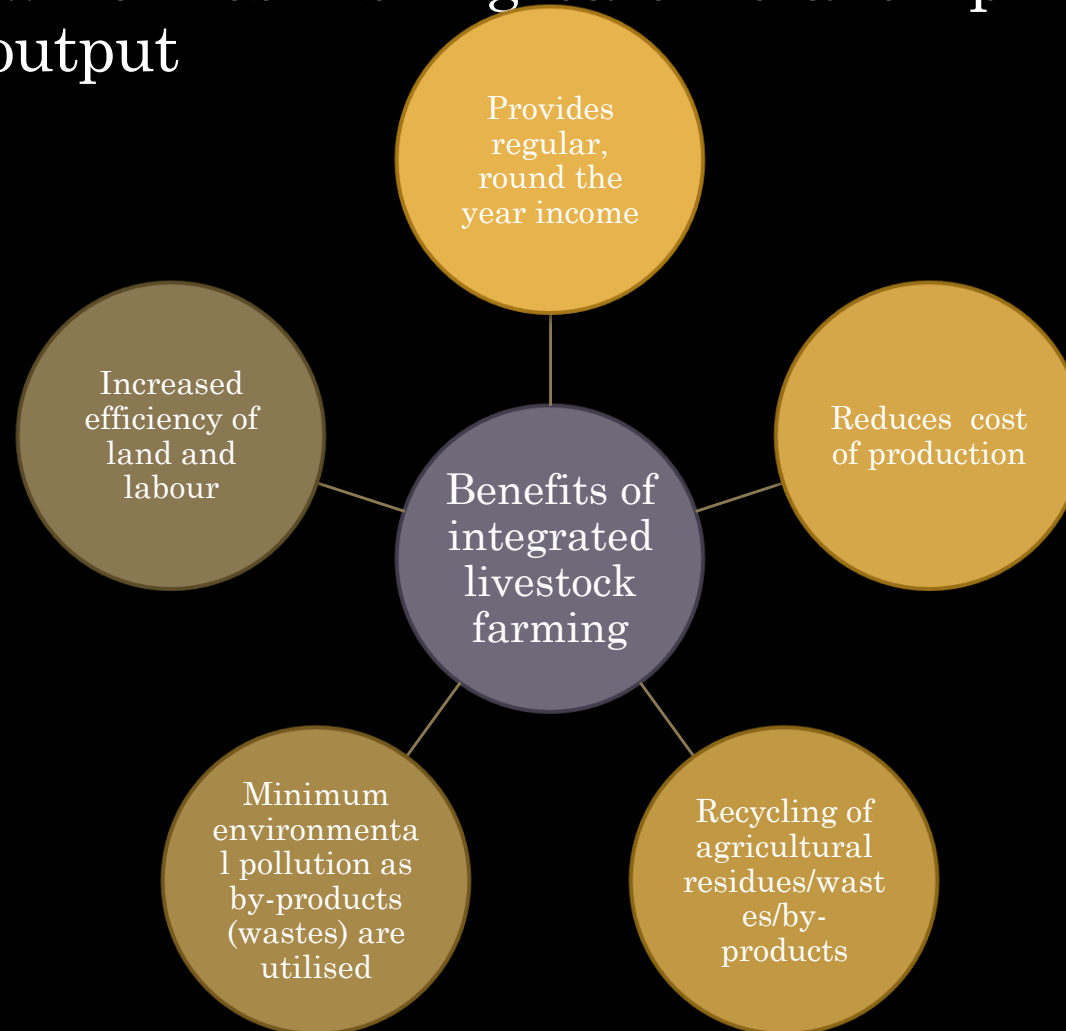
- Optimum housing environment
- Animal maintained under natural breeding
- Ayurvedic and homeopathic treatment
- Welfare of the animals

Animal Products

- Processed and preserved in a natural way
- No addition of preservatives, colors and preservatives

ii. Integrated Livestock Farming

Involves simultaneous farming of crops, animals and fish together in a synergistic way, which results in greater total output than the sum of their individual output



5. Animal waste utilization

A large volume of organic matter, generated from livestock farms is dumped locally, which emits a foul smell and pollutes the soil and water. Therefore, emphasis is placed on proper utilization of waste

i. Biogas Production

Biogas is a mixture of various gases produced by the breakdown of organic matter in anaerobic conditions (absence of oxygen) Manure generated at the livestock farm can be used as raw material for biogas production.

- Biogas can be produced in a biogas plant. Biogas is an odorless and colorless gas and is about 20 per cent lighter than air and has an ignition temperature in the range of 650° to 750°C.

Biogas can be produced in a biogas plant

- A biogas plant produces biogas and slurry. Biogas slurry is a good quality organic fertilizer

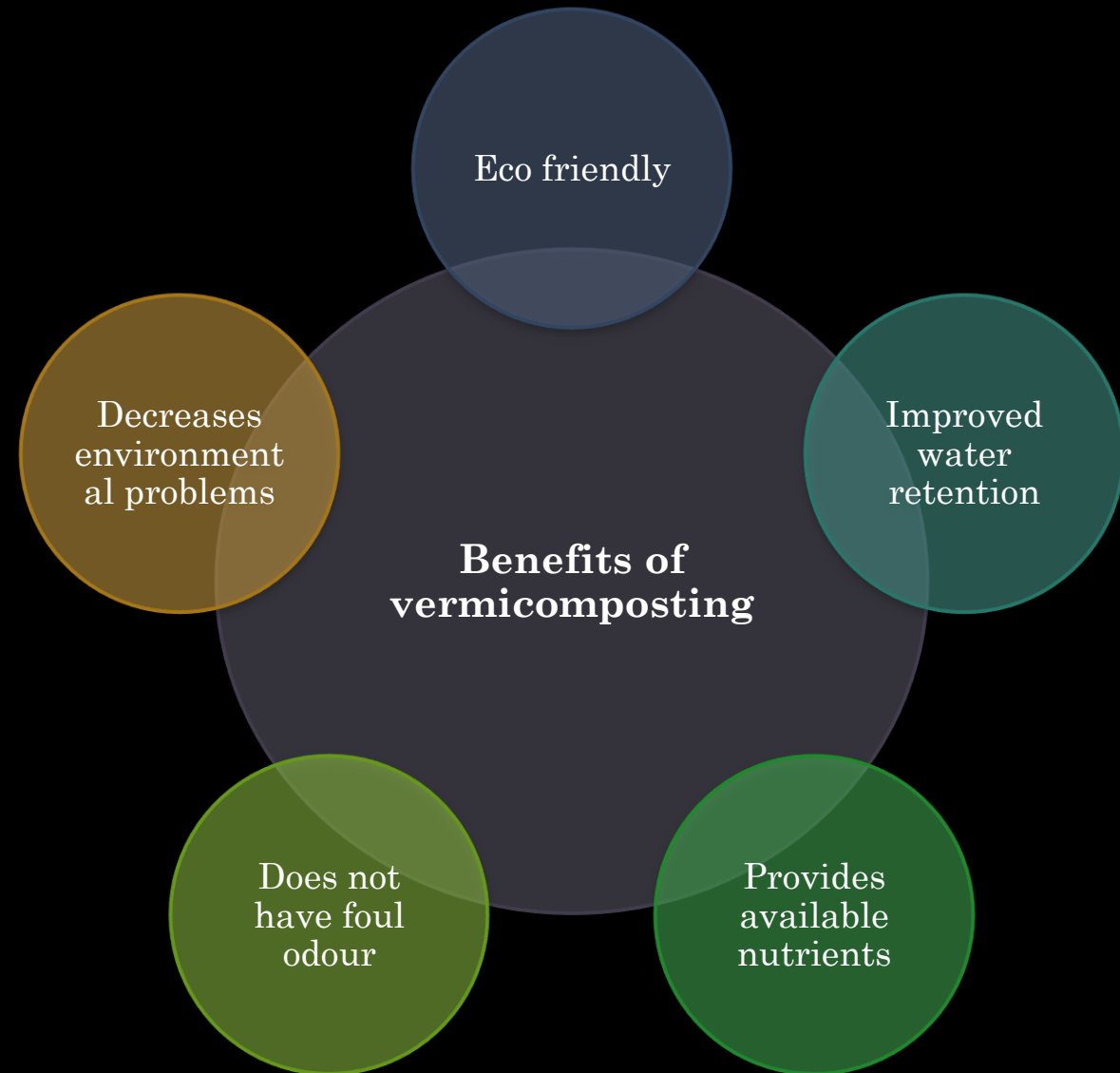


Uses of Biogas

- Cooking can be done through biogas.
- Lighting can be done
- Power generation

ii. Vermicomposting

- It is the use of earthworms for composting organic waste into humus like material.
- Earthworms can consume organic matter almost equivalent to their body weights
- Eisenia foetida* and *Lumbricus rubellus* (red worm) species of earthworms are commonly used for vermicomposting



Summary

In this session you have learnt about the various body parts of cattle and purposes of handling the farm animals.

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