

JOB ROLE – DAIRY FARMER

Sector – Agriculture

(Qualification Pack Code: AGR/Q4101)

Class XII



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UNIT 1 : MAINTAINING HEALTHY PERFORMANCE OF LIVESTOCK

Session 2: Prevention and Control of Parasitic Infections

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Session Objectives

The student will be able to:

- Describe Endo-parasites, worms, ecto-parasite.
- Discuss the deworming, deworming schedules in animals
- Explain common types of ecto-parasites and their control measures
- Precautions during medicine application

Introduction

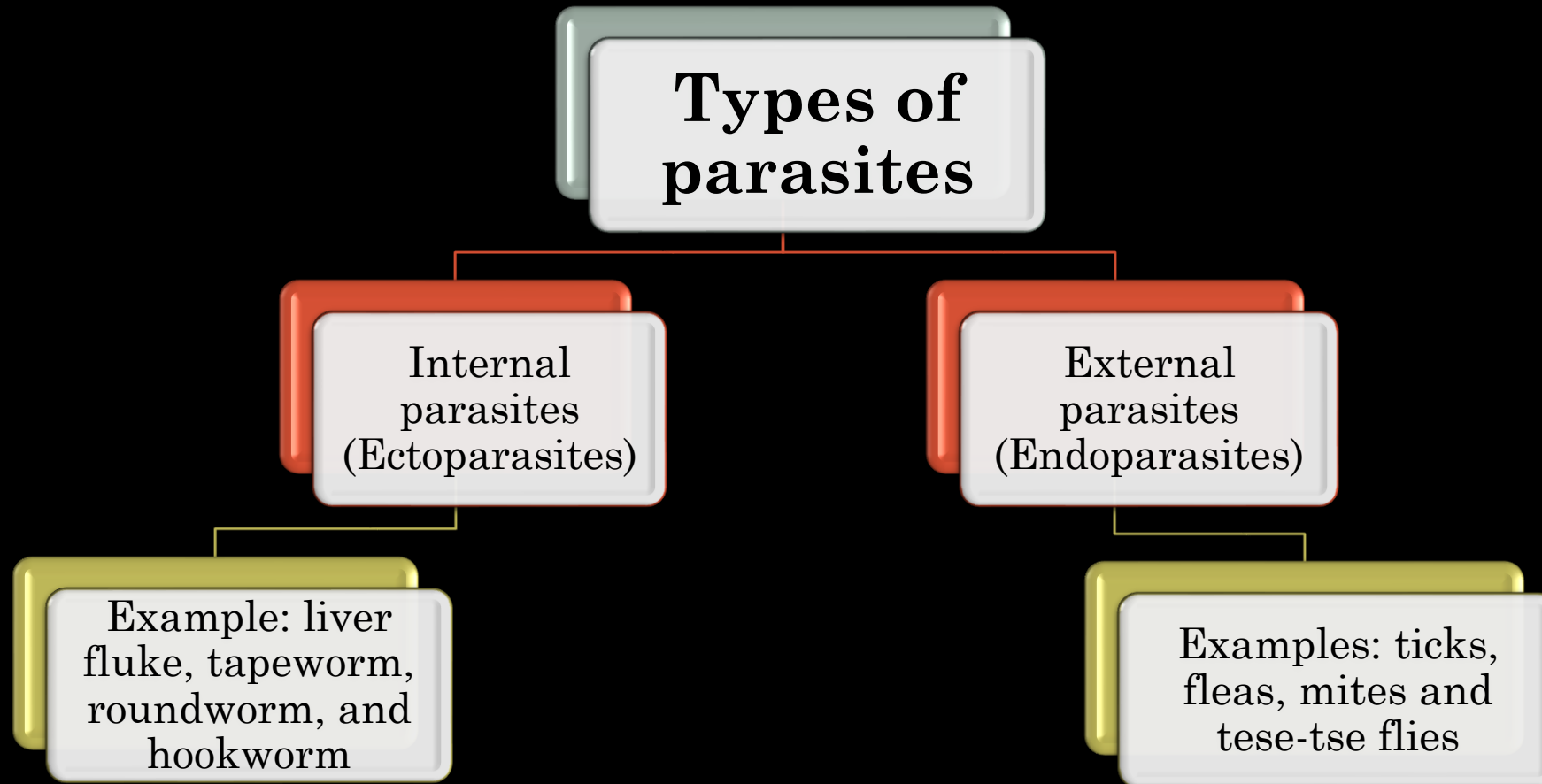
Parasites are organisms that live on or in a host organism and derive nutrients from it.

Parasites cause significant harm to farm animals by causing diseases and infections.

They lead to reduced milk yield and weight loss, apart from causing reproductive and clinical problems in dairy animals like rough skin, anaemia and diarrhoea.

Besides, a significant cost is incurred on the treatment of the affected animals.

Types of Parasite



Endoparasites (Worms)

Endoparasites, also called internal parasites or worms, live within the body of a host animal. These parasites lay eggs in the intestine of the infected animal.

How do Animals Get Parasitic Infection?

1. Excretion of the parasites through faeces of the infected animals contaminates almost all the grazing fields.
2. While grazing on such contaminated fields, the animals ingest these harmful parasites or worms.
3. Worms live inside the body of the animals and rob them for food and blood.
4. Thus, the need to control internal parasites will exist as long as farm animals graze the pastures.

Dewormers are used to control the internal parasites.

Deworming

Deworming is a practice of administering medicines to the infected animals and helping them to get rid of internal parasites or worms.

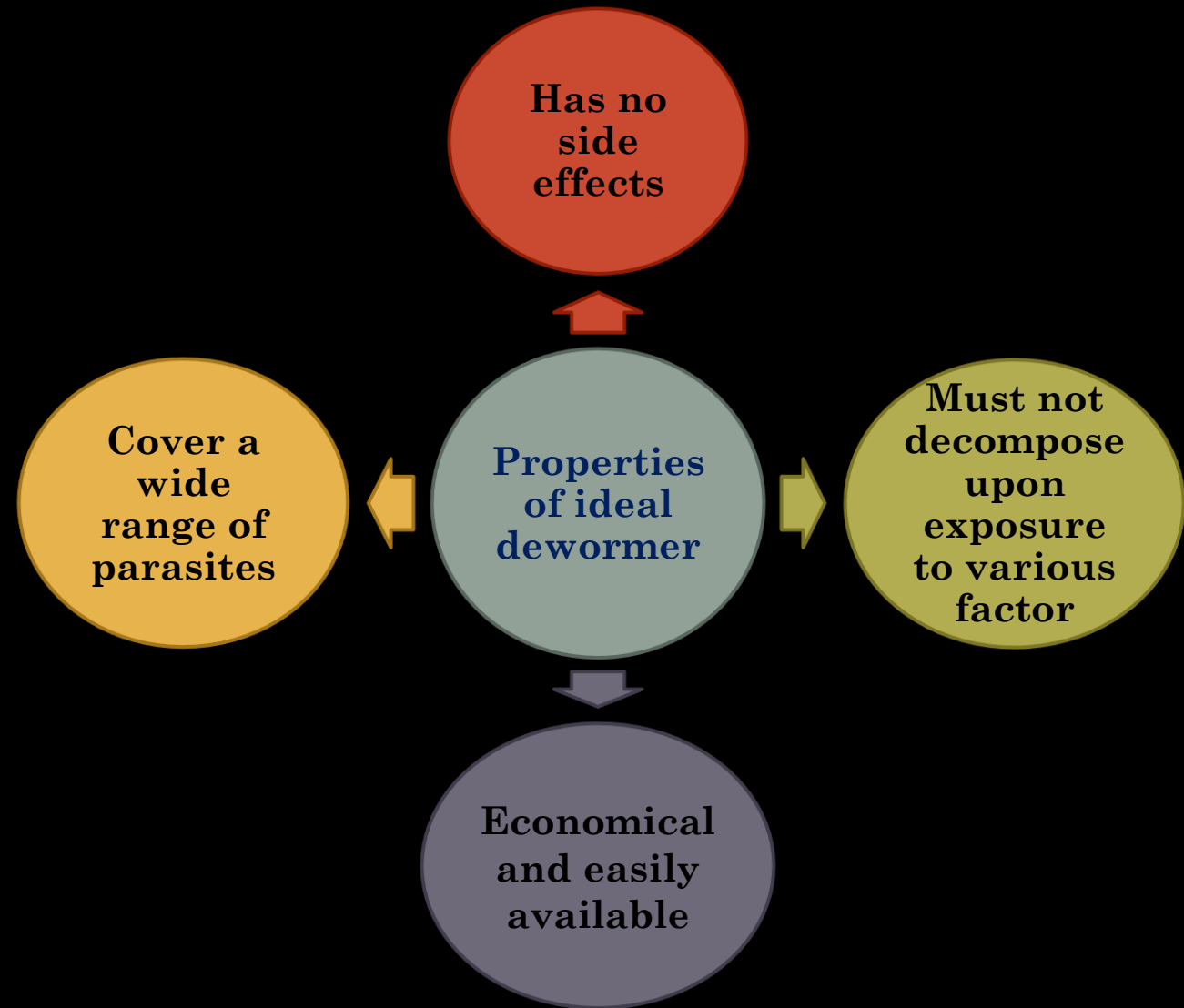
De-wormers can be administered either orally or through injection.

The aim of de-worming is to improve the immunity of the animals and prevent them from catching chronic parasitic infections, thereby, protecting farmers against production losses.

Selection of Dewormer

Choice of a de-wormer depends on various factors like age of an animal, its weight and effect of the de-wormer against different parasites.

Properties of ideal de-wormer is shown in the following figure:



Administering the Dewormers

1. Oral route

The majority of dewormers are given as liquid preparations, boluses and tablets orally.

Administered using syringes, bottles and drenching through mouth.

Boluses and tablets containing the dewormer are placed deep into the mouth of the animal or they can be crushed into powder form, dissolved in water and then given orally using a syringe.

2. Injectable route:

A number of dewormers are available as injectable preparations.

The prescribed route of injection for a particular dewormer needs to be followed strictly.

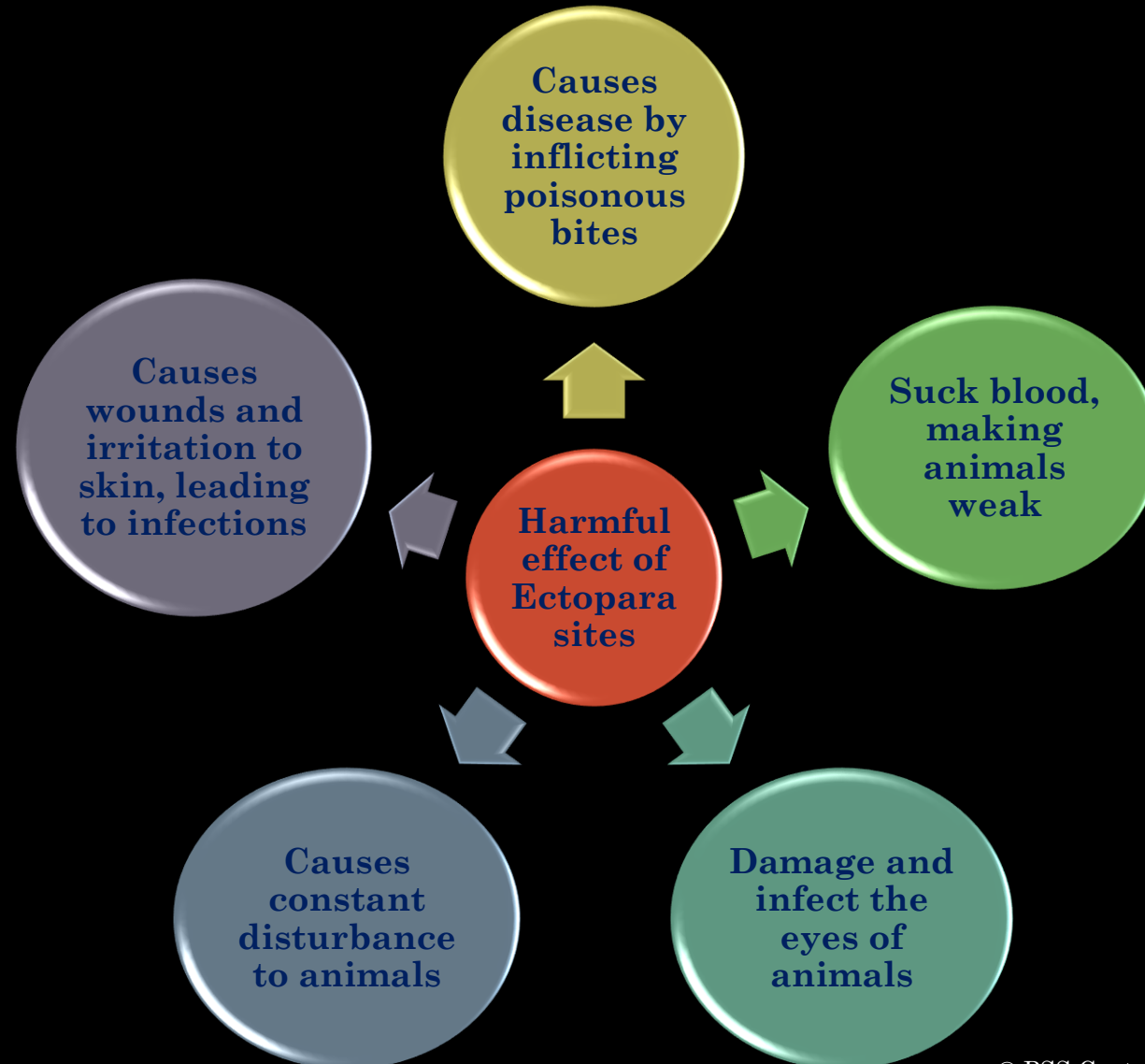
Deworming Schedule

1. An animal must be administered a de-wormer from the first week of its life.
2. Deworming must be done every month for the first six months, and thereafter, once in three months. Adult cattle can be dewormed once a year.
3. A de-worming drug and dosage must be recommended by a veterinarian and be administered under the person's supervision.
4. Attention must be paid to dosage to check side effects of a drug on an animal and see to it that it does not develop resistance against the drug.

Ectoparasites and its Control

1. Ectoparasites are organisms which live on the skin of other animals and cause detrimental effects on the skin and the overall health of the animals on which they live.
2. They also act as carriers for transmission of other diseases in animals.

Harmful Effects of Ectoparasites on Animals



Common Ectoparasites

(i) Mites and lice:

They live on hair and outer layer of the skin. Both lice and mites permanently thrive on the animal body and feed on skin tissues and blood of the animal.

(ii) Ticks:

They live on the body of animal for a short period of time. They feed on the animal's blood and are also responsible for transmission of a number of diseases.

(iii) Flies:

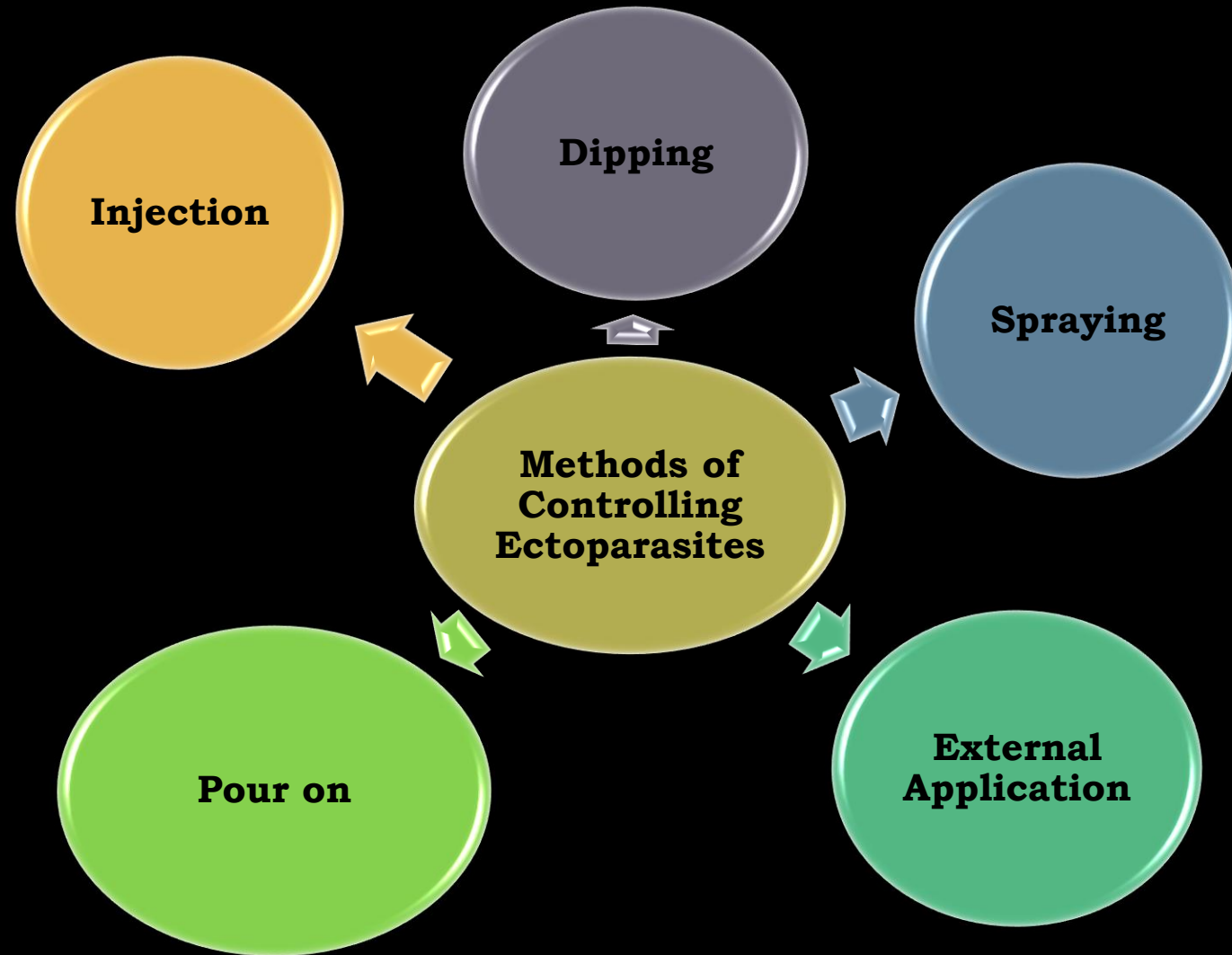
They feed on blood, sweat, skin secretions, tears, saliva, urine and faeces of animals. They directly puncture the skin or infest on wounds of the animal and can transmit many diseases.

Control of Ectoparasites

- (i) New animals immediately upon arrival on a farm, must be treated with ectoparasiticides.
- (ii) A multiple dose of ectoparasiticide required to kill the active stages of the parasite and eggs with a gap of 15–21 days.
- (iii) Clean and disinfect animal houses, paddocks or barns with suitable chemicals to destroy the parasites and their eggs on the floor, walls and corners of the animal houses.

Methods of Controlling Ectoparasites

Ectoparasiticides can be applied to animals through the following methods:



Precautions During Medicine Application

1. Appropriate dosage

Always administer the recommended dosage of medicines. Too high concentration may cause harm to the animals, whereas, too low concentration may develop drug resistance in them.

2. Wear protective clothing

People involved in handling and administering medicines to the animals must wear protective clothing, i.e., mask, goggles, gloves and boots to avoid contact with chemicals. If there is a contact, wash the area immediately with soap and water. Spraying or applying medicines on the animals must not be done in a confined and non-ventilated area.

Precautions During Medicine Application (cont....)

3. No dosage to sick animals

Ectoparasitocidal medicines must not be administered to sick animals or those under stress because these may cause further sickness and side-effects in them.

4. Provide feed and water to animals before dipping

The animal must be provided with sufficient feed and water before being dipped in medicine solution as thirsty or hungry animals can drink the solution or lick their own body, which may be harmful.

Precautions During Medicine Application (cont....)

5. Appropriate disposal of leftover medicines

Care must be taken that leftover medicines and chemicals do not contaminate the environment and are disposed of appropriately. Leftover medicines and chemicals must never be disposed into rivers or ponds. These can be drained into pits, which must be at least 150 metre away from water sources.

6. Cleaning of used equipment

Sprayers and other tools and equipment used in administering medicines to the affected animals must be cleaned immediately after use.

Summary

In this session, you have learnt about the Endo-parasites, worms, ectoparasite and deworming. You have also learnt about the measures to control parasites and precautions to be taken while during medicine application.

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