

JOB ROLE – ANIMAL HEALTH WORKER

Sector – Agriculture

(Qualification Pack Code: AGR/Q4804)

Class IX



PSS Central Institute of Vocational Education
Shyamla Hills, Bhopal – 462 013 , Madhya Pradesh, India

www.psscive.ac.in

UNIT 2: IMPLEMENTATION OF PREVENTIVE ANIMAL HEALTH CARE

Session 2: Vaccination in Farm Animals

Content

Title	Slide No.
Session Objectives	4
Introduction	5
Vaccination Schedule for Farm Animals	7
Pre- and Post-vaccination Care of Farm Animals	9
Handling of vaccines	12
Administration of Vaccine	14
Components of Vaccination Documentation	16
Summary	18

Session Objectives

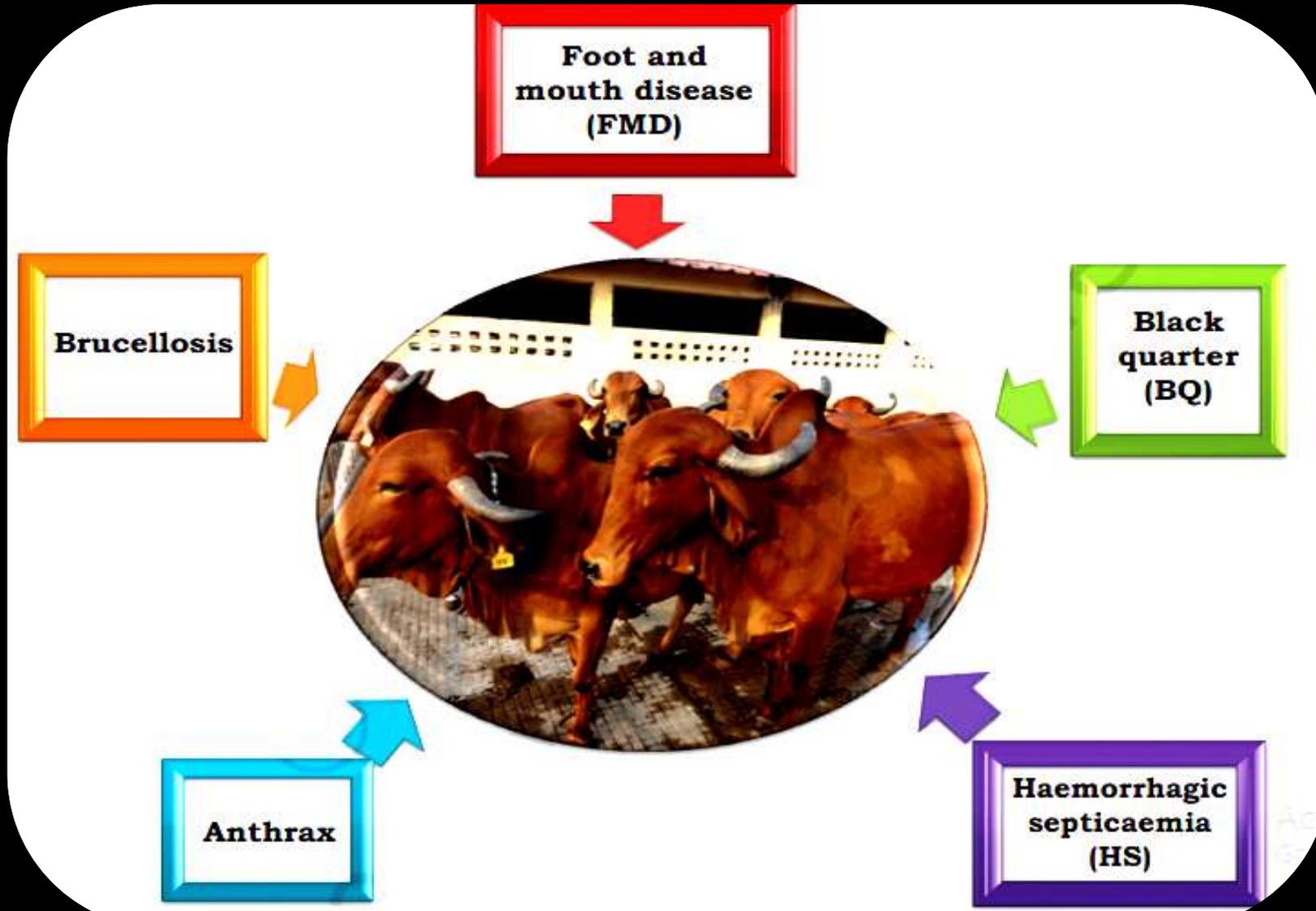
The student will be able to :

- Explain vaccination schedule of the animals.
- Describe pre and post vaccination care in farm animals.
- Handle the samples for further laboratory diagnosis.

Introduction

1. Vaccination is very important step in preventing common diseases in farm animals.
2. A vaccine produces resistance in the entire herd thereby minimizing the economic losses due to treatment of infectious diseases.
3. As a thumb rule, vaccines are administered only to healthy animals.

Major Diseases Requiring Vaccination in Cattle



Vaccination Schedule for Farm Animals

1. Primary vaccination:

First dose of vaccine administered to the animal for developing initial immune response towards a specific disease.

2. Booster vaccination:

Extra administration of the same vaccine used in primary vaccination in that farm animal.

3. Revaccination :

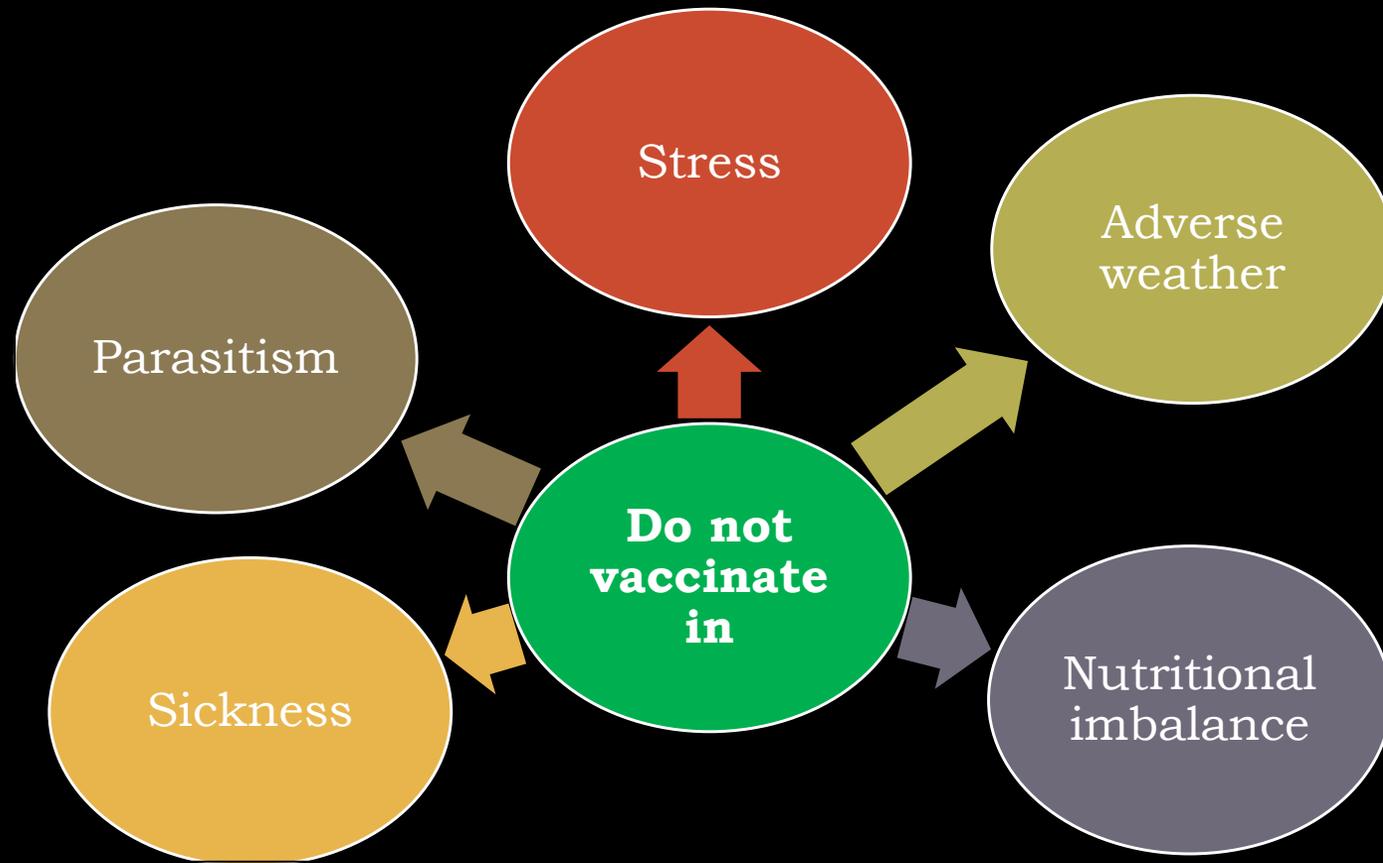
There is a certain period of time for which the vaccine protects the animal. This period of time is generally one year. Therefore, vaccination is repeated on a particular date every year. This is called revaccination.

Vaccination Schedule for Major Diseases in Farm Animals

Vaccine	Primary vaccination	Booster	Revaccination
FMD vaccine	6 - 8 wks of age	6 months after 1st dose	Annually
HS vaccine	6 months and above	—	Annually
BQ vaccine	6 months and above	—	Annually
Anthrax vaccine	6 months and above	—	Annually in endemic areas
Brucella vaccine	4-8 months female calf	—	—

Pre- and Post-vaccination Care of Farm Animals

Pre-vaccination care: Vaccination as a rule of thumb is administered only to healthy animals.



Ideal Conditions for Vaccination in Animals

1. Age of the animal:

Minimum age for vaccination in farm animals is 3–4 months. However, in some cases it also depends upon the type of vaccine used.

2. Pregnancy:

As a general rule, farm animals are never vaccinated during pregnancy.

Ideal Conditions for Vaccination in Animals (contd...)

3. Sick animals:

In general, animals with injuries and minor problems like watery nasal discharge, etc., can be vaccinated.

Vaccine is not administered in case of debilitated and severely ill animals. Proper response to the vaccine is generally not seen in animals with high body temperature.

4. Worm load in the animal:

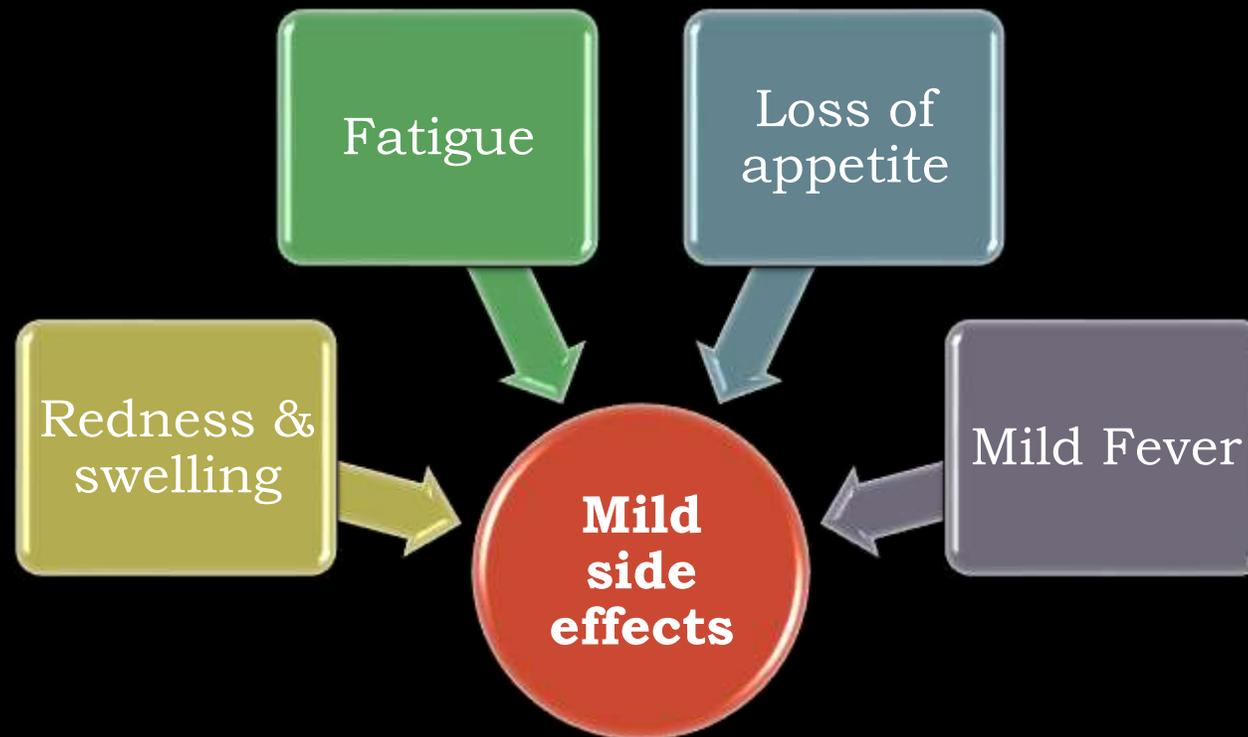
High incidence of worm infection or tick infestation causes physiological stress to the animal.

5. Other Factors:

Besides physiological status of the animal, precautions mentioned for the vaccines are strictly followed.

Post-Vaccination Care

Modern vaccines are extremely effective and safe. However, it is common for some animals to experience the following mild side-effects after vaccination :



Handling of Vaccines

1. Vaccines very sensitive to temperature variations.
2. Proper handling and administration of vaccines is important for their effectiveness.
3. Immediately upon receiving the vaccine through transport, the seal for intactness of the vaccine is checked.
4. Close attention paid to the expiry date printed on the vaccine.
5. Once the vaccines are unloaded, they are stored at 35°F–45°F (2°–7°C). Vaccines are never frozen.

Handling of Vaccines (contd...)

3. A single needle is permanently inserted into the stopper of the vial and the vaccine is drawn out with a fresh syringe used for every animal to avoid contamination .

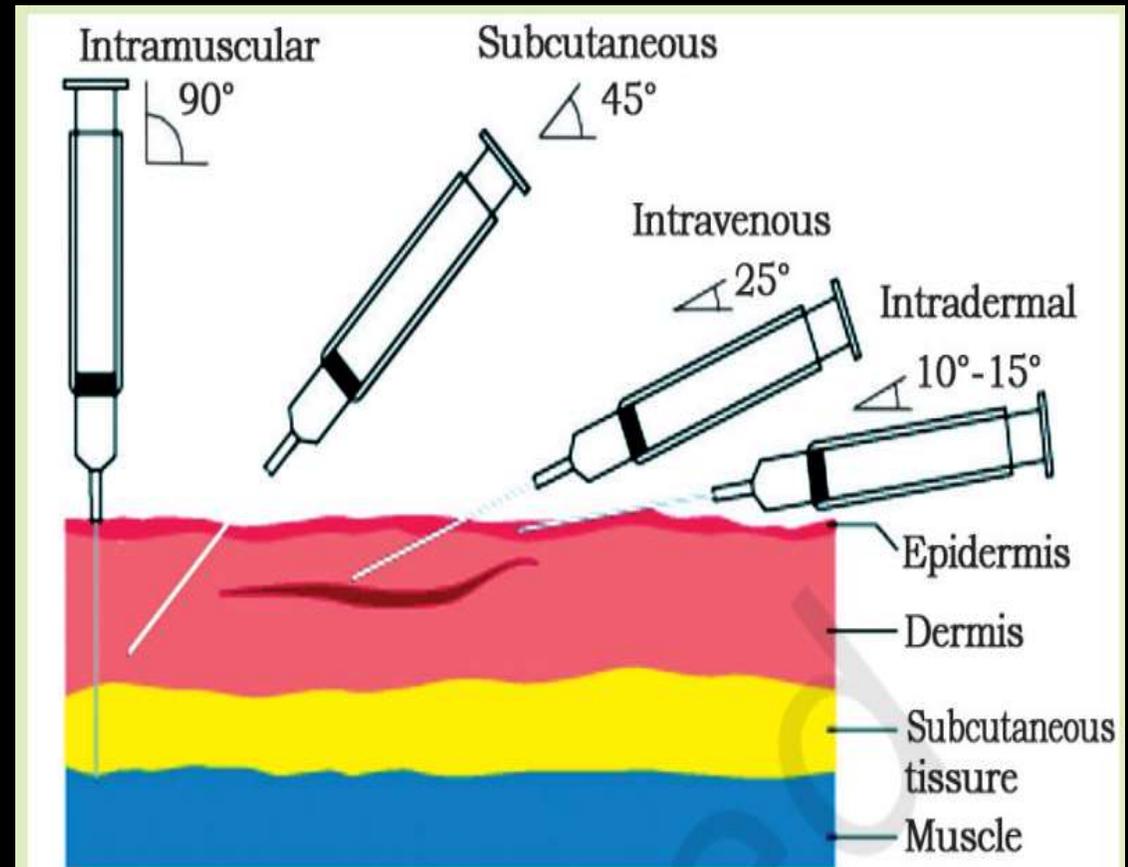
4. Most of the vaccines are freeze-dried, and need to be mixed with a sterile diluent prior to their use. Diluents are product-specific and must not be changed or substituted with another product or solution.

5. Once a vaccine has been reconstituted it is administered within 60 minutes and protected from temperature extremes by maintaining its temperature.

Administration of Vaccines

Routes of vaccine administration:

1. Subcutaneous route
2. Intra-dermal route
3. Intramuscular route



Administration of Vaccines (contd...)

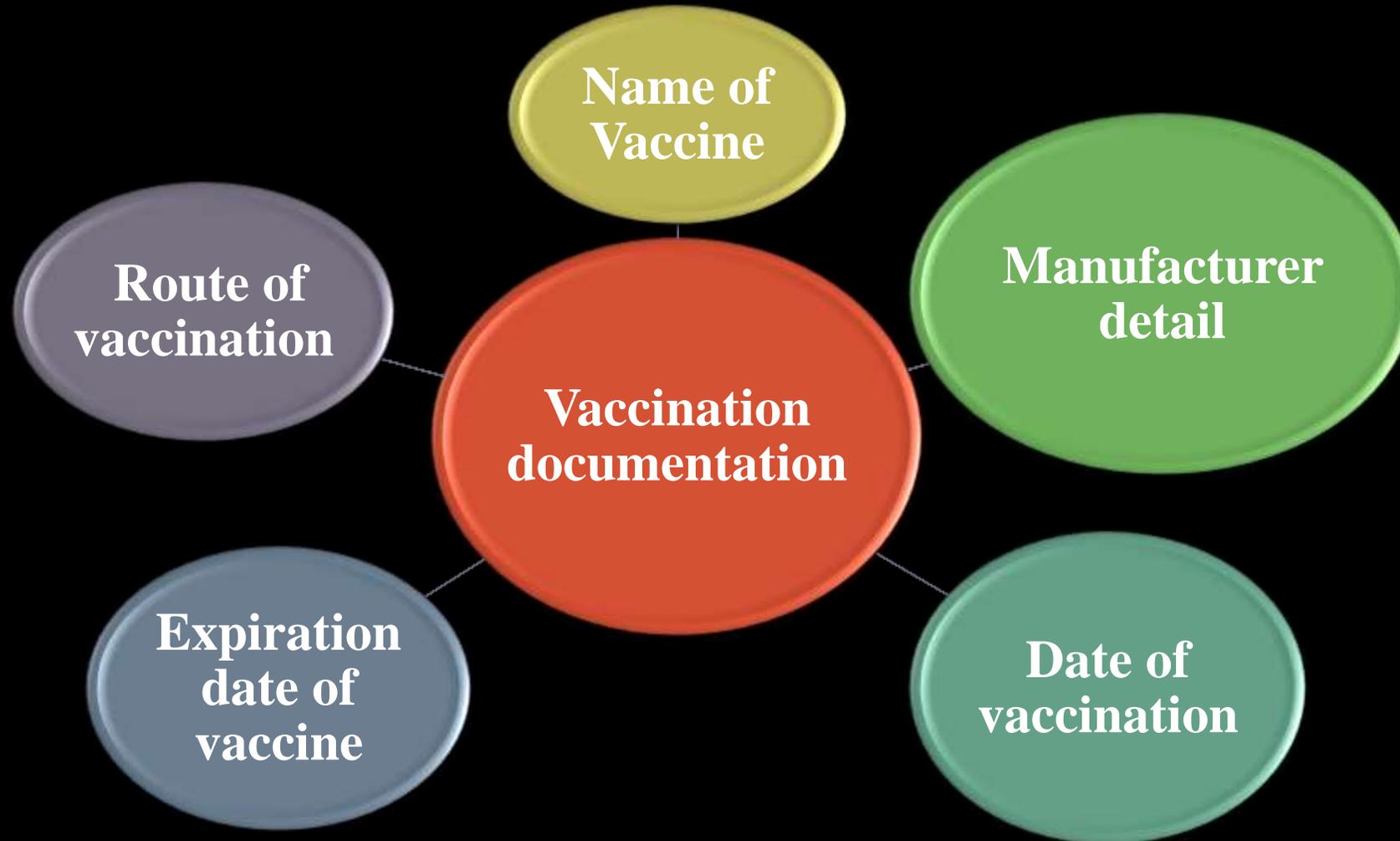
1. The route of administration, as indicated by the manufacturer, should be followed.
2. Do not clean the skin of the animal with an alcohol swab prior to vaccination as it can inactivate the micro-organisms present in the vaccine.
3. Most of the vaccines are infectious or “live” biological products so care must be taken to clean spillages of the vaccine.

Administration of Vaccines (contd...)

4. Proper documentation of any local or systemic reaction after vaccination, subsequent booster vaccinations, history of reaction to the vaccine is carried out.

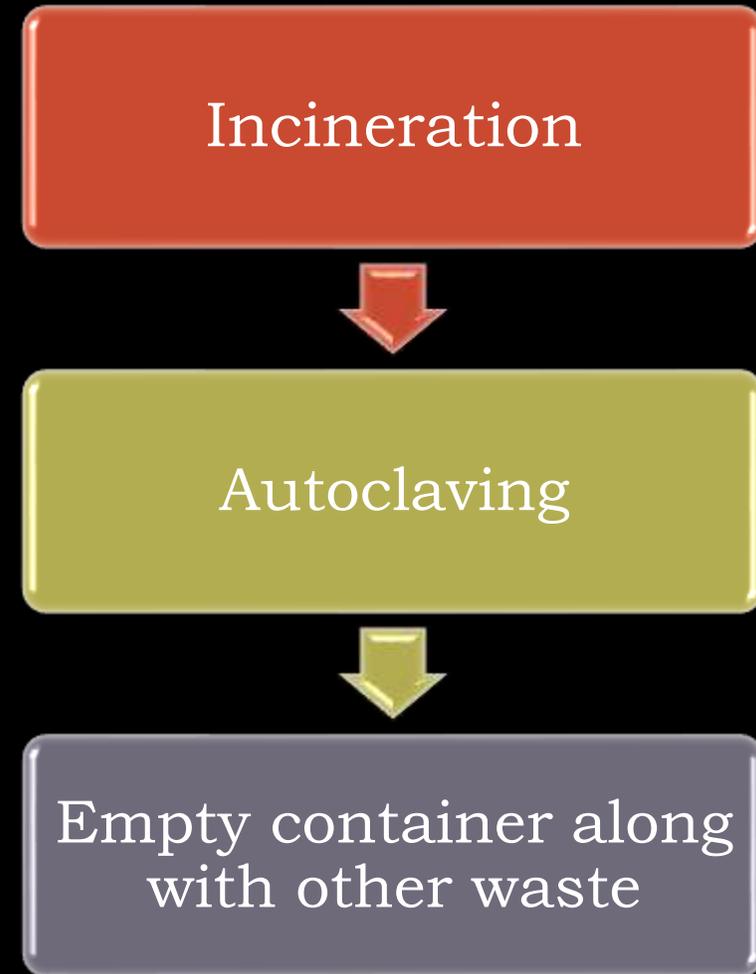
5. Proper documentation of the vaccination programme is important for many reasons, e.g., it is a legal proof of vaccination status whenever there is an outbreak of disease in that area. It also helps in monitoring adverse reactions in the animals after vaccination.

Components of Vaccination Documentation



Disposal of Vaccines:

1. Vaccine contains germs of diseases. Improper disposal of the unused vaccine might cause infection or disease in animals and human beings.
2. Unused vaccines and their containers are incinerated or sterilised by autoclaving or other approved procedures.
3. Vaccines are never disposed into sewers or other water sources. However, empty vials can be disposed directly with other waste.



Summary

- In this session you have learnt about vaccination schedule of farm animals, pre and post vaccination care in farm animals, handling, and administration of vaccines along with precautions for their disposal.

Project Coordinator : Dr. Kuldeep Singh

Assistance

Dr. Preeti Dixit



Joint Director

**PSS Central Institute of Vocational Education
Shyamla Hills, Bhopal – 462013 , Madhya Pradesh, India**

E-mail: jdpsscive@gmail.com

Tel. +91 755 2660691, 2704100, 2660391, 2660564

Fax +91 755 2660481

Website: www.psscive.ac.in