# Country assignment (Malaysia)

Sampling for laboratory diagnosis in FMD cases

Assistant veterinary officer

Veterinary assistant

Audience

# OBJECTIVES

# 1.Adhere to sampling protocols

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2. Collect the high quality sample in different stages of FMD infection

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2. Collect the high quality sample in different stages of FMD infection
3. Ensure sample high quality during transportation

# Outcomes of training

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1. Competent in FMD sample collection and diagnosis

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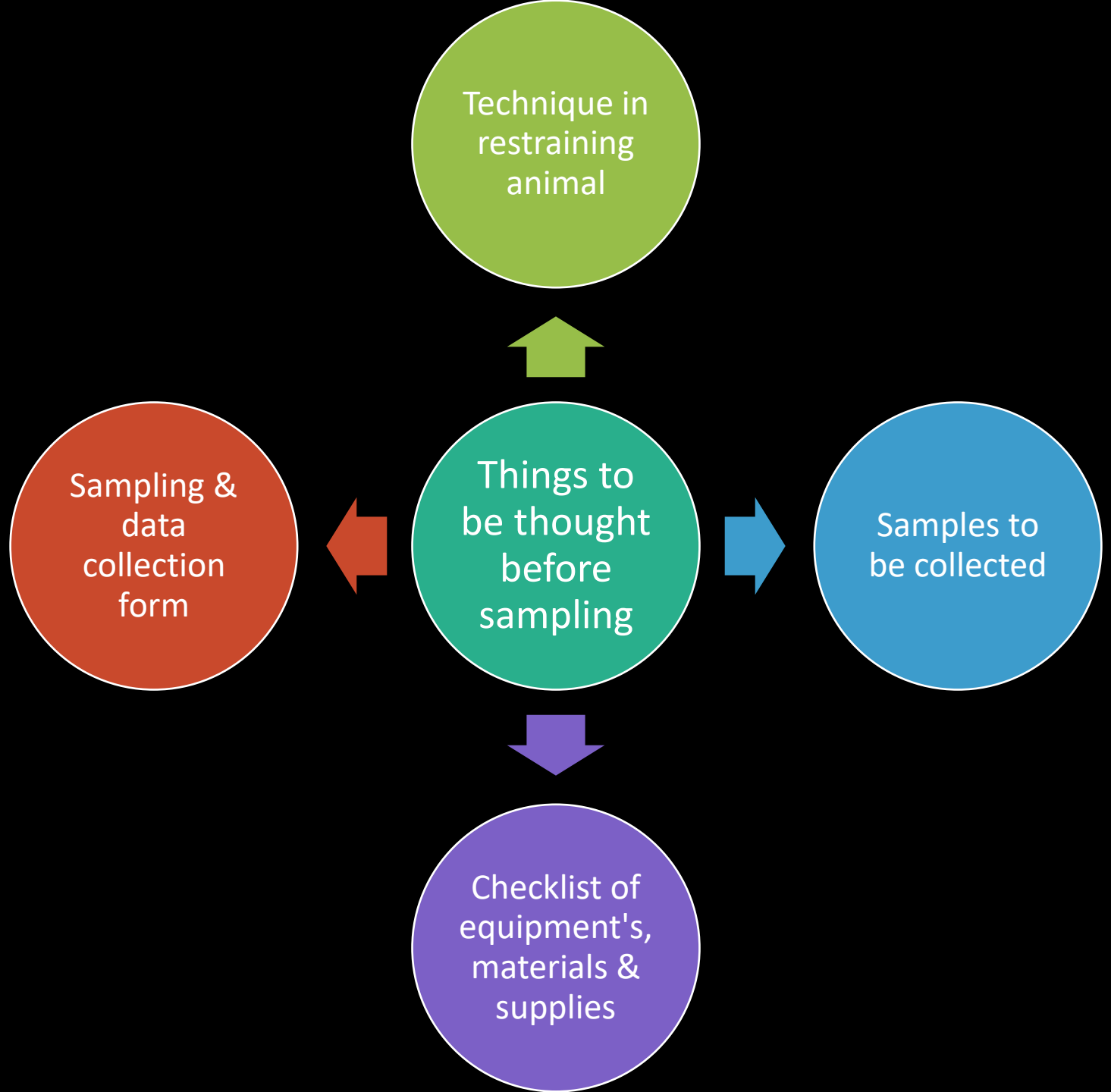
1. Competent in FMD sample collection and diagnosis
2. Aware of the risk that FMD can spread during sampling


Technique in restraining animal
Sampling & data collection form
Things to be thought before sampling
Samples to be collected
Checklist of equipment's, materials & supplies

Objective of the sampling

Can we avoid being the transfer agent for FMD virus


Samples would you collect in FMD cases

Do you understand about the topic discussion

# Sample types

- Laboratory diagnosis of FMD involves detection of either the FMD virus itself or antibodies to FMD virus

## FMD Virus

FMD virus present in the blood and milk during the viraemic phase

FMD Virus present in lesions in the mouth or on feet (vesicular fluid, epithelium)

Virus present in oropharynx in clinically recovered or chronically infected animals

## Antibodies of FMD Virus

Antibodies to FMD virus start to be detected around four days after clinical signs appear

The highest antibody levels are detected approximately three to four weeks post infection, or two to three weeks post infection

Acknowledgement: Karma Rinzin, Ashish Sutar, Bolortuya Purevsuren (Sampling for Laboratory Diagnosis)

Wear proper PPE

Straight to affected farm

Park outside farm

Organized sampling material

Enter farm



Make sure animal already segregated

# Before entering farm

Sample all animals that shows clinical signs

Collect vesicular fluid / epithelial cell / blood (whole blood / serum)


Keep sample in suitable media (MEM)

Label the sample

# Samples collected

Serum
(plain tube)

Epithelium cell

Whole blood
(EDTA)

## Epithelium

- 1g of tissue to be collected
- ELISA, PCR, Isolation

## Vesicular fluid

- Withdraw fluid using syringe
- PCR

## Whole Blood

- 5ml
- PCR

## Serum (surveillance only)

- 5ml
- NSP, VNT

# Labelling


## Marker

- Use only waterproof marker


## Label includes

- Animal id
- Date taken
- Types of samples

## Form

- Use correct form (MAKVET01)
- Make sure labeling on tube is the same as in the form

## BOOTS

Should be scrub, cleaned and disinfected

## CONTAINER

All container must be cleaned and disinfected before leaving farm

## COLD CHAIN

Make sure the samples is maintain in cold temperature (0 - 4°C)

makesure

## PPE

Discarded at farm and dispose

Put in yellow plastic bag (biohazard) for proper disposal

## VEHICLE

Tyres should be sprayed before leaving the farm

Vehicle should not stop at other farms or other places

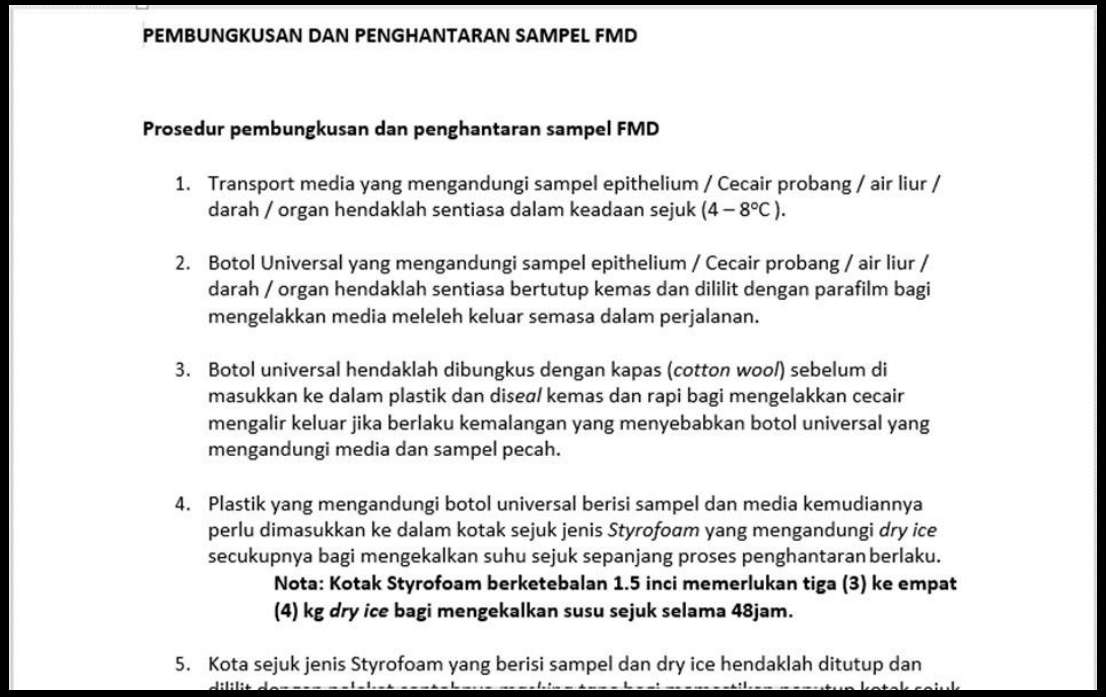
## SAMPLES

**MUST** be send to FMD laboratory in 24 hours

# Packaging and delivery of samples

**Packaging and delivery of samples according to the procedure set by the laboratory**

**Samples for FMDV detection have to be tested within 48 hours after collected**



**PEMBUNGKUSAN DAN PENGHANTARAN SAMPEL FMD**

**Prosedur pembungkusan dan penghantaran sampel FMD**

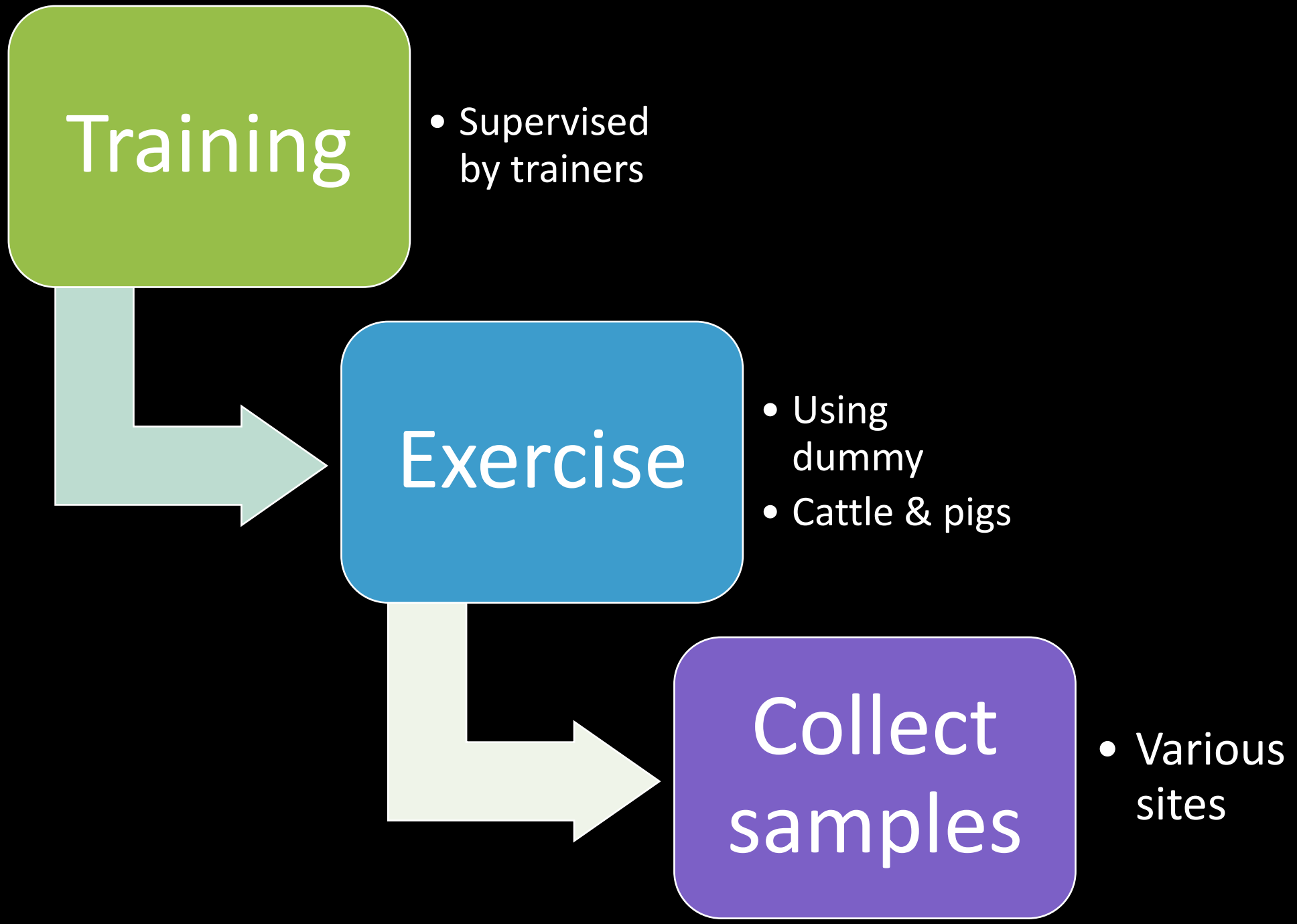
1. Transport media yang mengandungi sampel epithelium / Cecair probang / air liur / darah / organ hendaklah sentiasa dalam keadaan sejuk (4 – 8°C ).

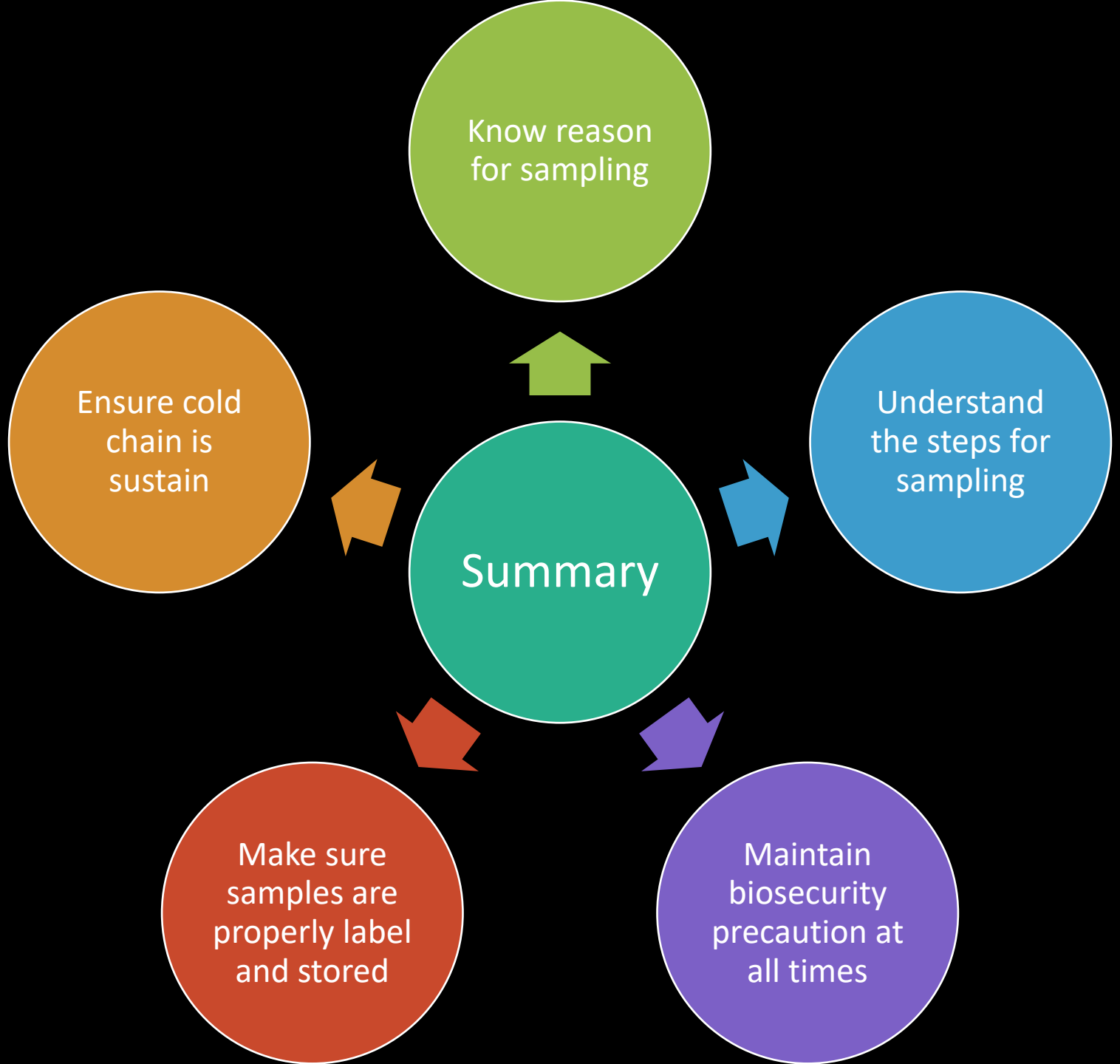
2. Botol Universal yang mengandungi sampel epithelium / Cecair probang / air liur / darah / organ hendaklah sentiasa bertutup kemas dan dililit dengan parafilm bagi mengelakkan media meleleh keluar semasa dalam perjalanan.

3. Botol universal hendaklah dibungkus dengan kapas (*cotton wool*) sebelum di masukkan ke dalam plastik dan di*seal* kemas dan rapi bagi mengelakkan cecair mengalir keluar jika berlaku kemalangan yang menyebabkan botol universal yang mengandungi media dan sampel pecah.

4. Plastik yang mengandungi botol universal berisi sampel dan media kemudiannya perlu dimasukkan ke dalam kotak sejuk jenis *Styrofoam* yang mengandungi *dry ice* secukupnya bagi mengekalkan suhu sejuk sepanjang proses penghantaran berlaku.
   **Nota: Kotak Styrofoam berketebalan 1.5 inci memerlukan tiga (3) ke empat (4) kg *dry ice* bagi mengekalkan susu sejuk selama 48jam.**

5. Kota sejuk jenis Styrofoam yang berisi sampel dan dry ice hendaklah ditutup dan


Training
• Supervised by trainers
Exercise
• Using dummy
• Cattle & pigs
Collect samples
• Various sites


Know reason for sampling
Understand the steps for sampling
Maintain biosecurity precaution at all times
Make sure samples are properly label and stored
Ensure cold chain is sustain
Summary

# Key Message

## Before sampling

- Knows the objective
- Make sure all equipment always ready

## During sampling

- Understand the principal of biosecurity
- Knows the technique of sample collection

## After sampling

- Sample must be send immediately
- Ensure cold chain is maintained