

WELCOME



Welcome #
all the
participants

Vaccination

@

Sheep & Goats



presented by

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Topics # covered

- Importance of Vaccination
- **Vaccine & Types**
- Available Vaccines
- Vaccination Calendar @ Adults
- **Prioritization**
- **Vaccination phases - Care & Tips**
- Vaccination failures – Reasons
- PHC of lambs/kids
- **Few FAQ's**

**Importance #
Vaccination**

Net Profits of Sheep /Goat enterprise depends on

Flock productivity

Production cost

Sale price of lambs/Kids

The 4 – pillars which
influences productivity of
S & G enterprise

A. Breeders

B. Feed

C. Health care

D. Management

3rd pillar

Health care

means ..

maintenance

or improvement of health

Health Care - Types

PREVENTIVE

taking medicine
or care **before**
the disease
develops

Nominal or no extra
cost involved

CURATIVE

Use of **medicines**
for **treating** sick
& ailing **after**
exhibiting
symptoms/lesions

Extra costs involved
& may be expensive

PROPHYLAXIS

also a preventive measure but...It is taking **medicine** before the disease develops

Supplementation of Vit A on day of birth

Use of antibiotic in first week of life to prevent Scours & Pneumonia

Strategic use of Coccidiostats in creep feed from 15th day to 90 days of age

- In general Sheep & Goats suffer with many **Infectious diseases** under Open grazing System

- Because of diseases farmers face issues like
 1. **Mortality** of S & G
 2. Lowered flock productivity
 3. **Costs on curative treatment**
 4. **Annoyance**
 5. Finally ... **low profits**

The best way to deal with
a Health problem is **to**
prevent it from occurring

Prevention @

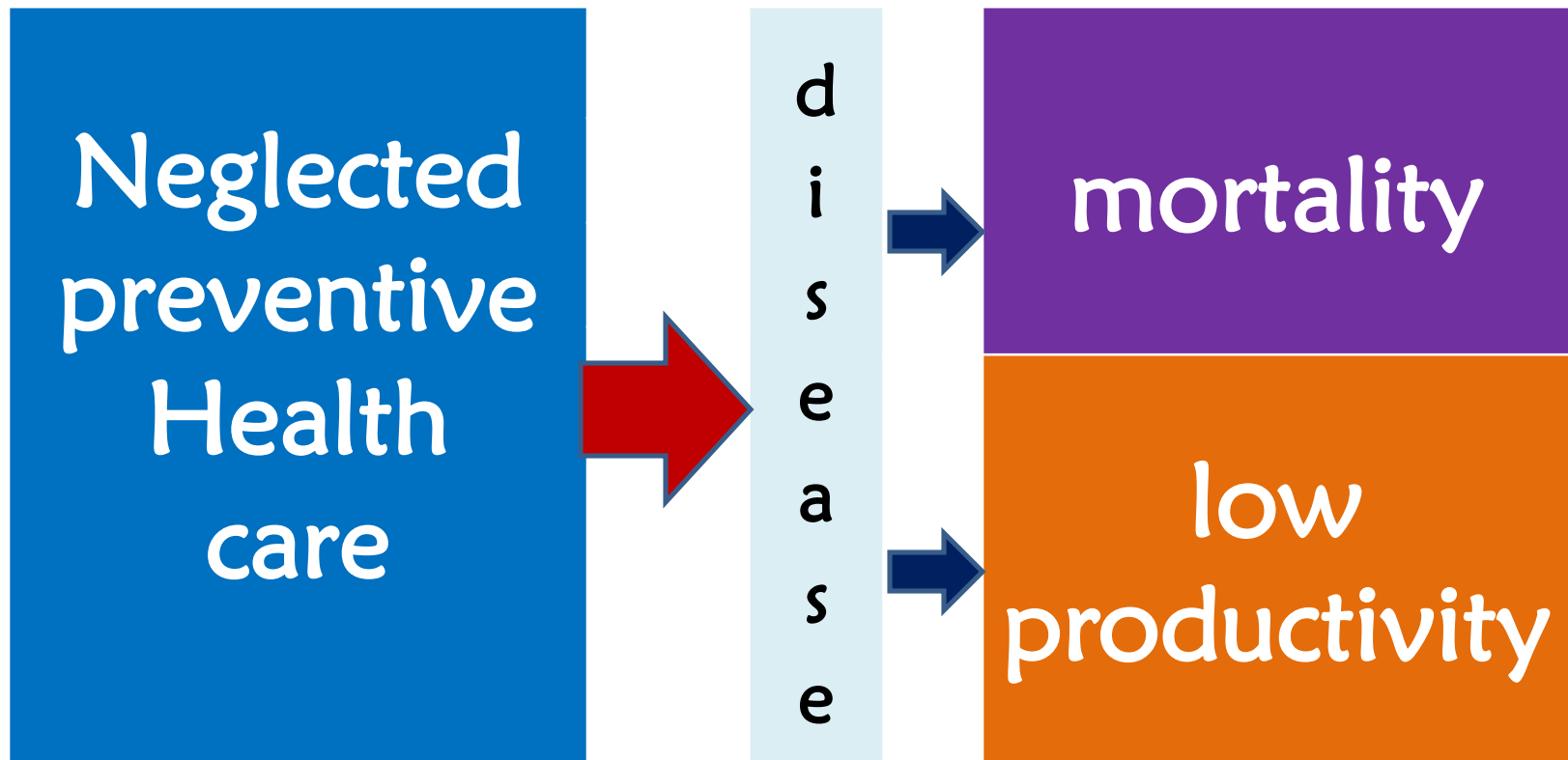
always better than **Cure**

Unfortunately ...
knowingly or unknowingly

Health care @ particularly
Preventive Health Care (PHC)

is the most **neglected** part of
Sheep/Goat farming

Effect of neglected P H C



Protecting Sheep & Goats from infectious diseases is very important

- To protect Breeders **reproductive life**
- To get standard **farm productivity**
- To protect newborn from **birth 2 sale**

Common
P H C measures
to be followed in
Sheep & Goats
farming

for ill Health & disorders

sources

Contaminated Water

Contaminated food

Polluted air

Infected Soil

Carrier/sick animal

imbalanced ration

predisposing

Over crowding

Poor Bio-security

Stress & starvation

Extreme weather

Neglected Preventive
Health Care

Lack of passive immunity

P H C MEASURES

1 **Housing**
Spacing/stocking,
Ventilation, lamb
shelters

Comfortable stocking
& protecting from
cold/rain /summer

2 **Colostrum feeding (3Q+H)**
@ 10-20 % of Bwt on **day-1**

3 **Balanced nutrition (TMR) &
fresh clean drinking water**

P H C MEASURES

4 Helminths control (Deworming)

5 Arthropods control (Dipping/spraying)

6 **Vaccination** (Periodically)

7 Hoof trimming Twice a year

8 Shearing Twice a year

P H C MEASURES

9	Hygiene	daily
10	Sanitation	daily
11	Disinfection	daily
12	Bio-security (quarantine is part)	daily

Vaccination

is one component of

PHC

P H C @

first main component

of Health care @

helps in

prevention & control

of diseases

Vaccination

VACCINATION

means administration of a
Vaccine

is a practice of building immunity
artificially against
specific infectious diseases
by injecting vaccines

Vaccination

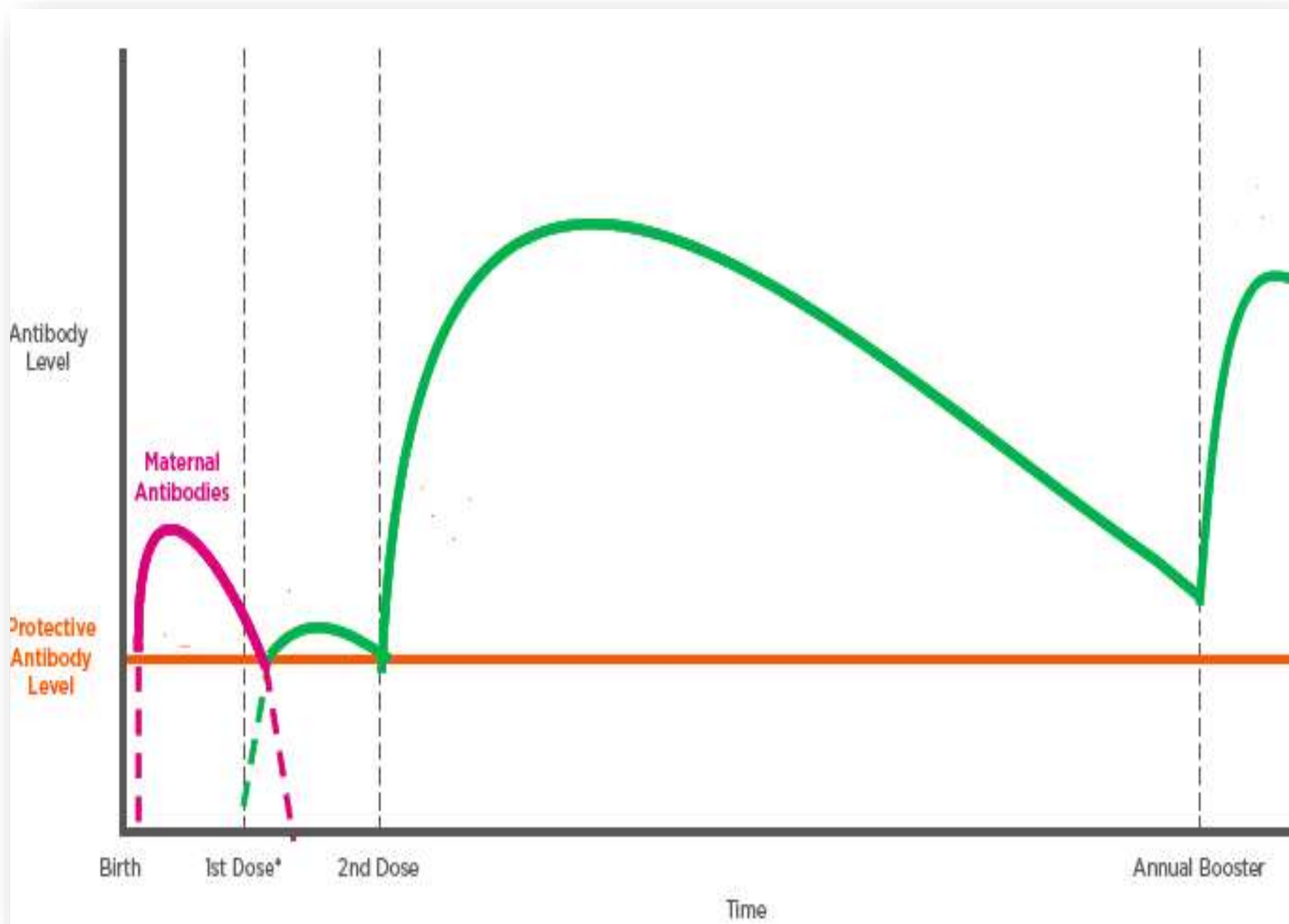
- is a form of risk management
- Is like **insuring Sheep & Goats**
- Provides **active immunity** against **specific diseases**
- **Prevents further spread of disease**

- Immunity is provided for a specific period
- **Vaccination is to be repeated as per immunity period**
- Not a substitute for Biosecurity
- **Vaccines are inexpensive & easy to apply**

Immunity

ability of an organism to resist a particular infection or toxin by the action of specific antibodies or sensitized white blood cells

Active		Passive	
Natural	Acquired	Natural	Acquired
by contracting the disease	by Vaccination	Colostrum (by maternal antibodies)	through antisera

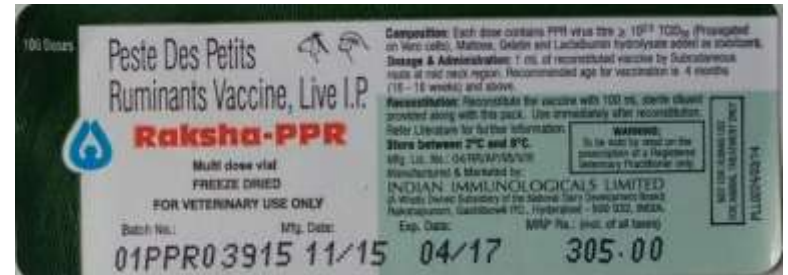


Types # Vaccines

Types of Vety Vaccines

- **Live**
PPR , SHEEP POX
- **Killed**
ET, HS , BT
- **Toxins** (Toxoid)

Inactivated Toxins of Bacteria # Ex -TT



Live Vaccines

- Attenuated
- weakened
- Low virulent
- More fragile
- Dilution required
- Single dose gives full immunity

Killed Vaccines & Toxoids

- Inactivated
- Inactivated toxin @ Toxoids
- Ready to use
- No dilution required
- Booster dose required

Available #
Vaccines

VACCINE

Vaccine is a biological agent
/an antigenic substance
prepared from the causative
agent of a disease

In India :
Vaccines are **not**
available for all
infectious diseases
of Sheep & Goats

Available Vaccines

VIRAL

- PPR
- Pox
- Blue Tongue
- FMD

BACTERIAL

- Tetanus
- ET /Over eating
- HS
- Brucellosis
- Anthrax

Vaccines @ not available

- OPA
- C.Ecthema
- CLA
- Foot Rot
- E.Coli
- Coccidiosis

- Anaplasmosis
- Skin Infections
- ICK
- M.Agalctiae

Foot - Rot Vaccine

కాలిగిట్టల వ్యాధికి టీకా

• దేశంలో తొలిసారిగా అభివృద్ధి చేసిన ఎస్వీవీయూ

తిరుపతి (పశువైద్య విశ్వవిద్యాలయం), న్యూఢిల్లీ: గొర్రెలు, మేకల ఆరోగ్యాన్ని దెబ్బ తీస్తున్న కాలిగిట్టల వ్యాధి నివారణకు తిరుపతి లోని శ్రీవేంకటేశ్వర పశువైద్య విశ్వవిద్యాలయం (ఎస్వీవీయూ) టీకాను అభివృద్ధి చేసింది. దేశంలో తొలిసారిగా పోషకులకు అందుబాటులోకి తెచ్చేందుకు సిద్ధమైంది. రాష్ట్రీయ కృషి వికాస్ యోజన (ఆర్కేవీవై) నిధులతో 2015 నుంచి తిరుపతిలోని రాష్ట్ర స్థాయి పశువ్యాధి నిర్ధారణ ప్రయోగశాలలో డాక్టర్ రాజేప్రమీల నేతృత్వంలో పరిశోధన చేపట్టారు. ఇక్కడ అభివృద్ధి చేసిన టీకాను జీవాలపై ప్రయోగించి సత్యలితాలు సాధించారు. ఈ టీకా పరిజ్ఞానాన్ని బదిలీ చేసేందుకు హైదరాబాద్ లోని ఇండియన్ ఇన్స్టిట్యూట్ రాజికల్ లిమిటెడ్ (ఐఐఎల్)తో ఈనెల 14న ఒప్పందం కుదుర్చుకున్నట్లు వర్సిటీ ఉపకులపతి డాక్టర్ వి.పద్మనాభరెడ్డి శుక్రవారం తెలి

పారు. ఐఐఎల్ టీకాలను తయారుచేసి రైతులకు అందుబాటులోకి తీసుకురానుంది.

ఇదీ వ్యాధి తీవ్రత

వర్షాకాలంలో చిత్తడి నేలల్లో మేతకు వెళ్లినప్పుడు మట్టిలోని వ్యాధి కారకాలు గొర్రెలు, మేకల కాలిగిట్టల్లోకి ప్రవేశించి కాళ్ళను బలహీన పరుస్తాయి. ఈ వ్యాధి సోకిన జీవాలు మందలో వెనుకబడతాయి. నడవలేక, ఆహారం తీసుకోలేక బలహీనపడి చనిపోతాయి. ఒకవేళ కోలుకున్నప్పటికీ వాటిలో పునరుత్పత్తి సమస్యలు తలెత్తి పోషకులకు నష్టం వాటిల్లుతోంది. దేశంలో తొలితర కస్టోమర్ కాలిగిట్టల వ్యాధి ఉద్ధృతంగా కనిపించింది. తెలుగు రాష్ట్రాల్లోనూ వ్యాధి తీవ్రత ఎక్కువగా ఉండడంతో 2015లో ఎస్వీవీయూలో పరిశోధనలు ప్రారంభించారు. ఇక్కడ తయారు చేసిన టీకాను ఏడాదికి రెండు సార్లు వేయాలని, ఈ డోసు ఐయ్యూ యా.5-6 వరకు ఆవుతుందని శాస్త్రవేత్త డాక్టర్ రాజేప్రమీల తెలిపారు. వర్షాకాలంలో టీకా వేస్తే వ్యాధిని ముందుగానే నివారించవచ్చని సూచించారు.

- **SVVU – Thirupathi** (AP) Developed Vaccine for Foot-Rot disease
- As per VC - SVVU, on 14th Dec , one **MoU** will be made between **IIL & SVVU** for commercial production of Foot-Rot Vaccine

Calender of Vaccination (Adults)

Vaccination Calender

- is one area which looks more confusing for new entrepreneurs like **What**, **When** & **How**

- because of which **timely/**
needy
vaccination is unattended many a times

Vaccination Calender

Month	Vaccine to be applied	Route	Repeat time
January	PPR	S/C	3 Years
	Pox	I/D	Annually or as per manufacturer
April	HS & ET	S/C	6 months
July	BT	S/C	Annually
	FMD	I/M	As per manufacturer
day of birth	TT	I/M	Annually
Anthrax & Brucellosis Vaccination			As per local Vet advise
Note : Manufacturers instructions are to be followed with reg to Age, Site of inoculation, dose and repetition			

Vaccination Calender

- is just a **suggestive chart**
- not a general / seasonal calender
- area specific
- farming specific
- not one time activity
- time specific
- better to apply all available vaccines as **per prioritisation**

Prioritisation

depends on

- area epidemic History
- severity of Challenge

Imp to note

- Its not just vaccination to be done as per prioritization
- but ..a **successful** Vaccination is very important

Vaccination # Phases

Pre-vaccination phase

Vaccination phase

Post vaccination phase

Care & tips for
successful
Vaccination

Pre Vaccination phase

- Plan vaccination **as per prioritisation** (as per epidemic need / urgency)
- Ensure last deworming, done in last 28 days only
- Plan for vaccination within 28 days after deworming for effective immunity development
- Ensure source, storage and transportation care of Vaccine

- Ensure non-expiry of Vaccine
- Read the instructions issued with Vaccine by manufacturer very carefully.
- Keep Vaccines & Diluent stored / refrigerated between 2-8 centigrade degrees
- A day before, keep Syringes & needles stored /refrigerated between 2-8 centigrade degrees

Storage of Vaccines

LIVE

- ✓ Vaccine is to be **freeze dried**
- ✓ Diluent is to be **refrigerated**



INACTIVATED & TOXOID

- ✓ Vaccine is to be **refrigerated**



- **Throw away frozen bacterial Vaccines**
- **Do not use frozen diluents**
- **Ensure shaded area for vaccination**
- **Reconstitute Vaccine just before application**
- **Keep ready required quantity of Vaccine & diluent**
- **Keep ready required no.of syringes & needles**

Vaccination phase

- Ensure shade for reconstituted Vaccine also
- Vaccinate S/G during early morning cool hours only
- Ensure cold chain from first to last inoculation
- Follow route of administration as indicated
- Do not hold reconstituted vaccine vial with palm # **hold at neck**



On Vaccination # Care & Tips

Generally most Vaccines are injected by SC method only. Few are by I/Dermal & by IM

For Subcutaneous injection :Caudolateral neck region is preferred or behind the elbow over the ribs or at flank region

Do not administer Vaccines over the loin or hindquarters



S/C inj site & inoculating



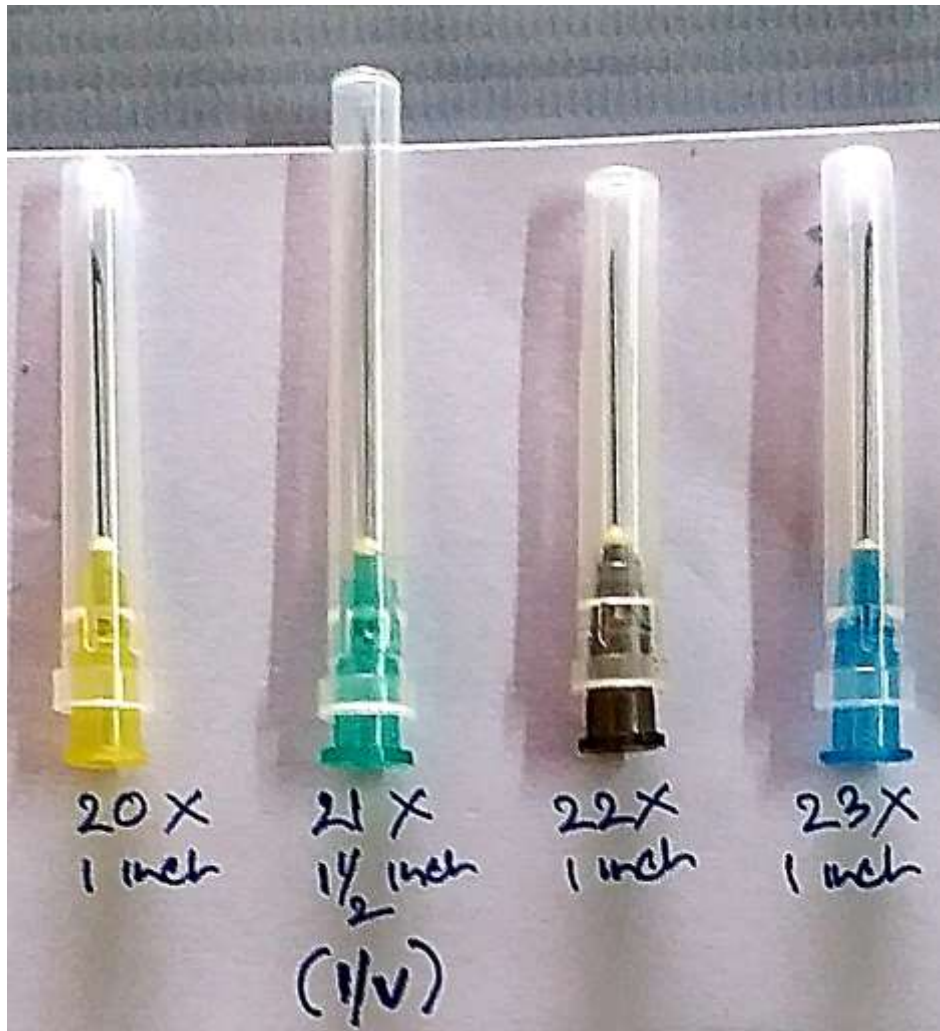
On Vaccination # **Care & Tips**

Use prescribed size & length needles only.
Length of needle should not be more than 1 inch

Keep changing needles & syringes for every 20-25 Sheep /Goats

Needle used to withdraw Vaccine from the bottle should not be used for vaccination

Always use sterile / disposable Syringes and needles.



On Vaccination # **Care & Tips**

Ensure to avoid contamination of Vaccine while drawing.

If Vaccine is contaminated, discard it

Give exact dose as indicated

Ensure proper delivery of the full dose of Vaccine

Dose of Vaccine is same for all ages and irrespective of body weights

On Vaccination # Care & Tips

Ensure no under dosage

Vaccinate healthy Sheep /Goats only

Do not vaccinate ailing

Do not vaccinate adult Ewes/Does 2-3 weeks
before & after delivery

Do not vaccinate 0-2 months age lambs/Kids

On Vaccination # Care & Tips

Vaccinate whole flock and not just individual Sheep/Goats.

Make sure that site of injection is dry & clean

Handle Sheep/Goats carefully while applying the Vaccine

Try to minimize stress of handling, particularly of pregnant

On Vaccination # **Care & Tips**

Do vaccination with small groups & in tight pens so that S/G can't run & move here and there.

lambs are to be vaccinated first and adults later.

Plan to utilise Vaccine within 60 minutes after reconstitution

Not to use **Semi Automatic Vaccination Guns** while doing vaccination in **open areas**



Post Vaccination phase

- **Do not touch or rub the site of injection after vaccination**
- **Do not wipe the injected area with disinfectant or cloth or palm**
- **Do not disturb vaccinated flock 3-4 hours post vaccination**
- **Discard vaccine if any balance left 60 minutes after reconstitution**

Discarding left over Vaccine & Used Syringes, Needles

Discard left over Vaccine (particularly live Vaccines) by pouring in to **hot / boiling water**

Discard used syringes and needles also by dropping in **hot/boiling water**

Indication of effective inoculation

14 days after vaccination observe at site of Vaccine for any lesion

- a. Viral Vaccines : no lesion/Mark should be observed
- b. Bacterial Vaccines : a small /green gram sized nodule felt on palpation
- c. Pox Vaccine by ID route: Lesions/takes should be clearly visible

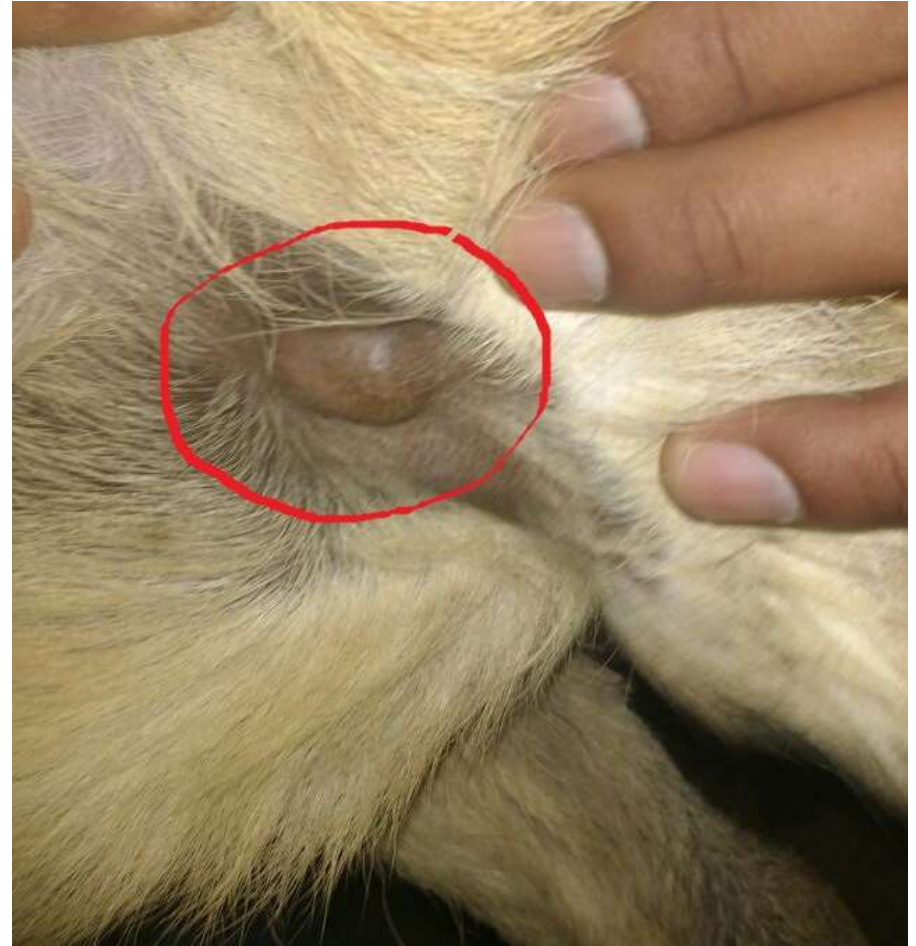
Faulty / wrong inoculation

shows abscess /Nodules formation or subcutaneous inflammation at site of injection as shown in pic

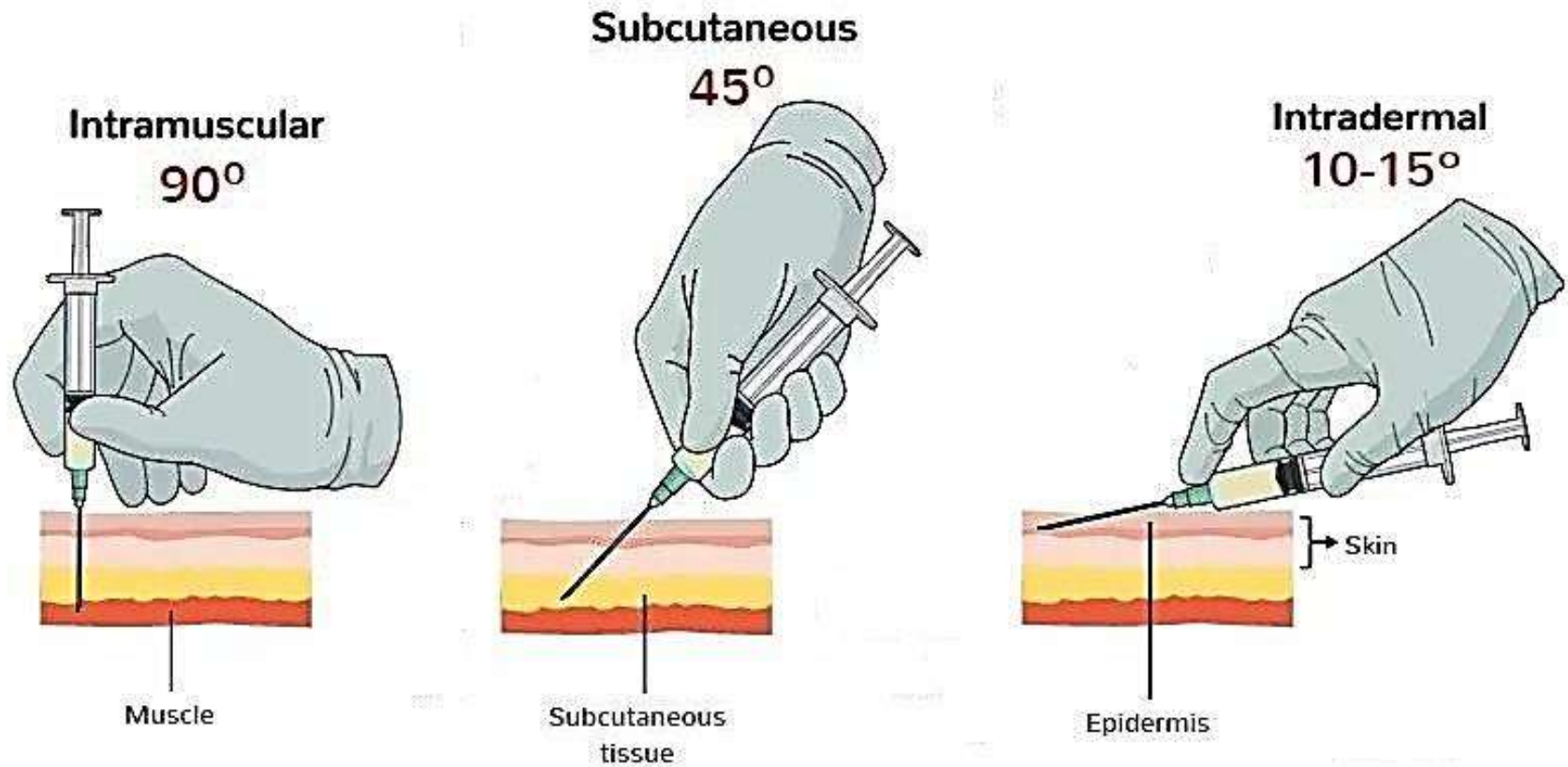
Pox by ID route #

1. Wounds
2. Lesions/takes in **less than 2/3 rd of flock**

faulty inoculation



Injection Techniques



Vaccination failures

Reasons

Vaccination failures - Reasons

- **Vaccine & Diluent**

(Cold chain break @ manufacturer to Storage)

- **Animal status**

(Weak, Sick, ailing, IP phase, Worm load)

- **Inoculation**

(Reconstitution , climate, Time , Shade, Inoculation, site, dose, Cold chain & Booster)

Repetition of Vaccination

Repeat vaccination as per Immunity period

Booster dose @14 days after first vaccination

Booster dose for all bacterial vaccines is must

Booster dose is mandatory in lambs vaccinated first time

Record keeping of vaccinations mandatory

P H C of lambs / Kids

Day 1

Naval cord disinfection

feeding **Colostrum**

Inj.TT & Vit.A supplementation

2nd -7th day

Oxy powder orally @ 5 mg/kg bwt

from 15th
day

feeding tender legume leaves

Creep feed with **Coccidiostats**

from day
60

Start giving TMR

First deworming

ET vaccination & HS vaccination

Multi-Vitamin syrup

FAQs

- At what age lambs / Kids are to be vaccinated first time ?

Ans : at 2 months of age

- Which vaccine is to be applied first time to lambs / Kids ?

Ans : ET followed by HS

- What should be the minimum gap between two subsequent vaccinations ?

Ans : 14 days

FAQs

- Till what age Sheep / Goats are to be vaccinated ?

Ans : as long as they are in the farm

- Is deworming mandatory before vaccination ?

Ans : Yes. Vaccine is to be applied between 4th – 28 th day post deworming

FAQs

- Should all available Vaccines be applied to Sheep & Goats ?

Ans : Not necessarily. Vaccination should be as per infection threat in farming area

- Can two vaccines be applied at a time ?

Ans : Generally “No”. But in emergency – Yes. In such case ensure to prevent stress on animals with proper care

FAQs

- Reasons for failure of vaccination ?

Ans :

- a. Break of cold chain between point of manufacture to inoculation
- b. Faulty reconstitution
- c. Contamination of vaccine during vaccination
- d. Under dosage
- e. Vaccinating Sick animals
- f. Worm load

FAQs

- If Pox lesions/takes do not appear under I/D ear inoculations of **Pox vaccine**, should vaccine be inoculated again ?

Ans : Yes. If Pox lesions/takes do not appear in not less than 65% of flock between 7-21 days post vaccination, Vaccine is to be applied again

Correct site of pox inoculation



FAQ

- Shall vaccine be applied in **Outbreak flock** ?

Ans :

- a. All ailing and sick are to be separated from flock
- b. Healthy Sheep & Goats only shall be vaccinated.
- c. S/G in incubation may not respond for Vaccine .
- d. Hence a close watch post-vaccination till 14-21 days is mandatory to identify symptomatic
- f. If no new cases are found within 14-21 days, it shall be treated as S/G are protected & safe

Thank
you
all

