

TICK BORNE DISEASES, PREVENTION AND TREATMENT (Level 2)

| Topic | Training & information Content |
|-------|--|
| 9.1 | Introduction to Animal health (Prevention vs curative health care) |
| 9.2 | Health signals |
| 9.3 | Biosecurity of dairy farms |
| 9.4 | Tick born diseases (Prevention and treatment) |
| 9.5 | Worm infections (Prevention and treatment) |
| 9.6 | Vaccination schedule and planning |
| 9.7 | Mastitis prevention and treatment |
| 9.8 | California Mastitis Test |
| 9.9 | Usage and storage of veterinary medicines on dairy farms |
| 9.10 | Administering of medicines to dairy cows |
| 9.11 | Instruction use of injectors into teat canal |
| 9.12 | Key performance indicators (KPIs) for monitoring health status of dairy herd |



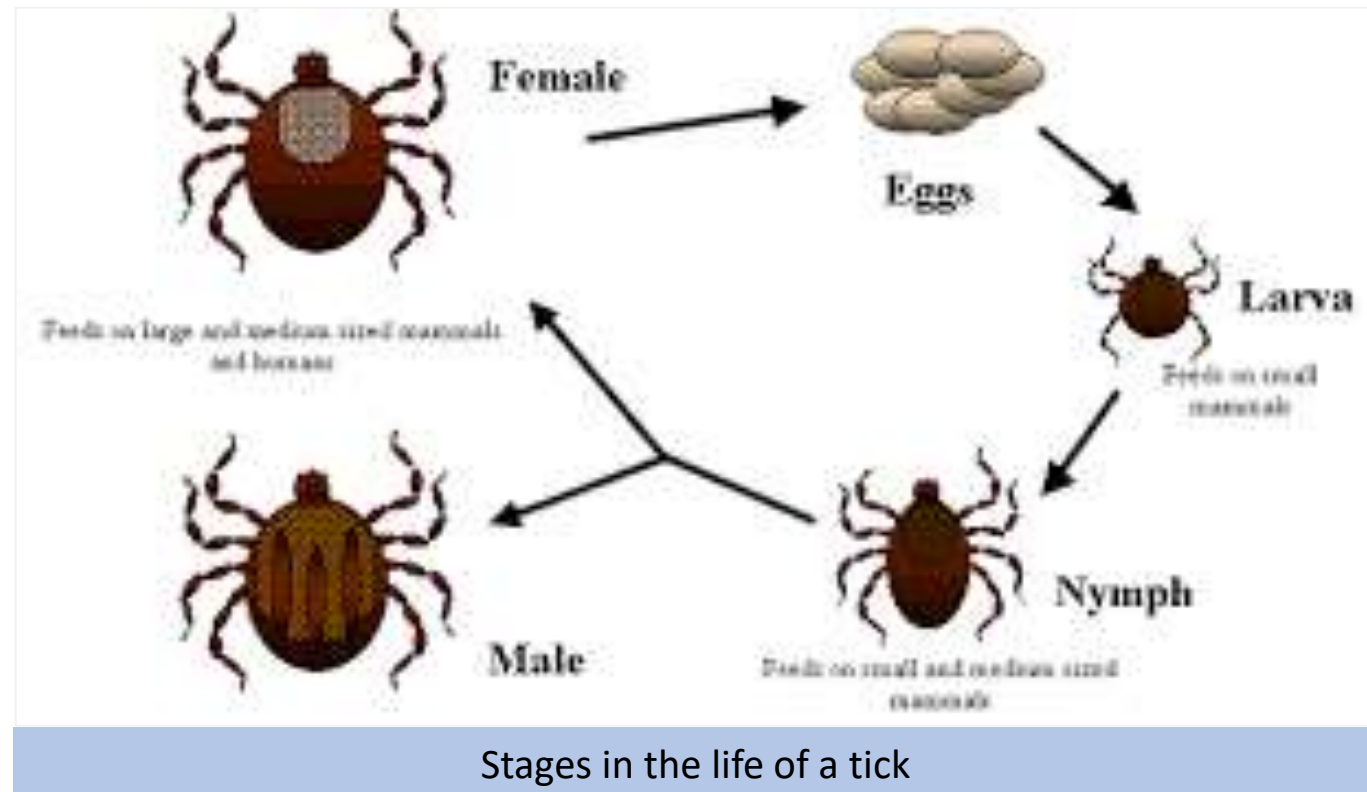
1. You will learn about (learning objectives):

- How to prevent and reduce tick-borne diseases in a dairy farm.
- How to spray a cow using acaricides.
- How to prevent tick resistance against acaricides.
- How to choose the proper acaricide.
- How to construct a crush.
- How to treat a cow with tick borne diseases.



2. Introduction

- Tick-borne diseases are a major issue in many dairy farms.
- Lots of cattle die while medicines are expensive.
- The results of spraying (with acaricides) are often not good.
- This module will give tools how to improve.



3. Preventing TBD: The 10 Golden rules

- Applying the presented 10 golden rules has been proven successful in battling tick-borne diseases.



4. Rule 1: Close the farm for animals from outside

- Any cow, sheep or goat can carry tick borne diseases.
- If you keep the out of your farm, they cannot make your animals sick.
- Even buying animals is a serious risk.
- When buying, keep bought animals separated for at least two weeks for monitoring.
- Ask your vet or extension officer how to arrange this.



To minimize the risk of entrance of infectious diseases at dairy farms is called BIOSECURITY. Infectious diseases are caused by bacteria, protozoa, viruses and fungi.

4.1 Rule 1 Cont'd: Close the farm for animals from outside

- With a good boundary fence no animals can come in or out.



5. Rule 2: Make pastures an unfriendly living environment for ticks

- Ticks like shrubs and bushes.
- No shrubs and bushes means less ticks
- Clear pastures from bushes and shrubs.



5.1 Rule 2 Cont'd: Make pastures an unfriendly living environment for ticks

- Clearing can be done by:
 - Slashing
 - Mowing
 - Burning

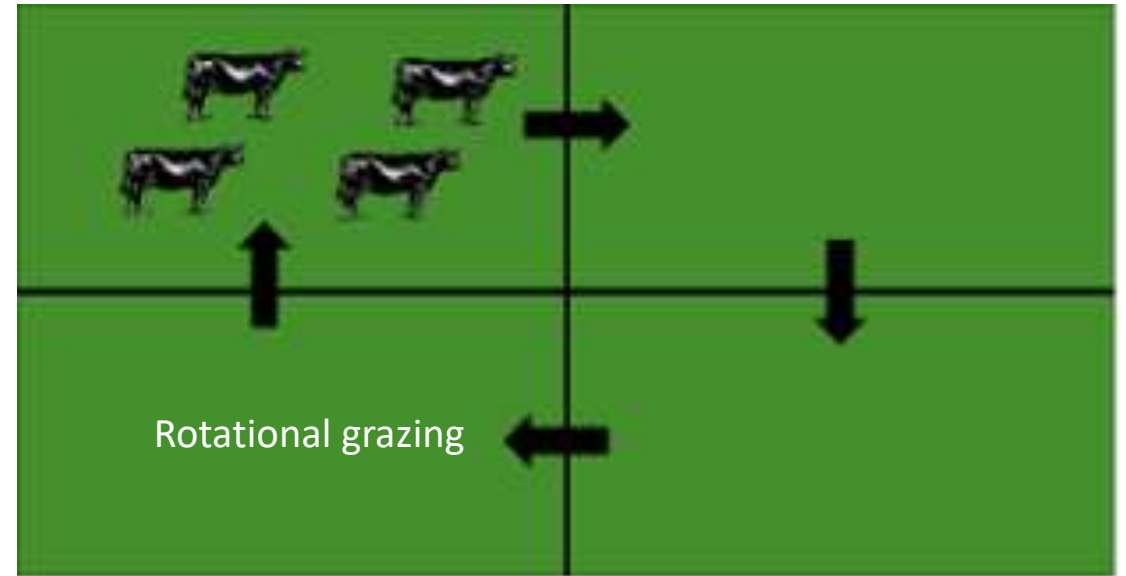


Mowing after grazing to remove bad grasses helps to reduce tick pressure



5.2 Rule 2 Cont'd: Make pastures an unfriendly living environment for ticks

- When there are no animals in the pasture, ticks will slowly die.



Goats will still pass this cattle fence



Cattle grazing in fresh pasture

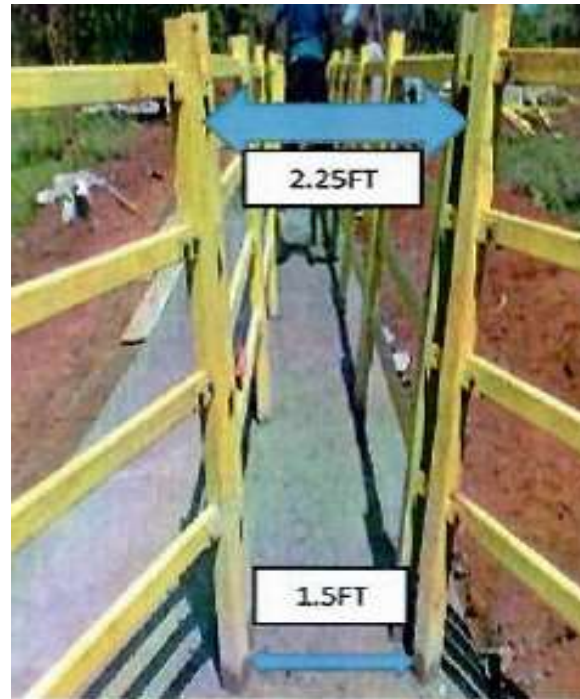
6. Rule 3: Construct a good crush

- Every Dairy farm should have a crush

Recommendations:

- **Get help:** You need good dimensions.
- Cattle should stay behind each other.
- The floor should be flat and dry.

Appropriate and recommended crush
(A good crush with one row of cattle)



FRONT VIEW



SIDE VIEW OF THE CRUSH

6.2 Rule 3 Cont'd: Construct a good crush



To the left a poor crush.

- Bad floor.
- Too wide, cattle will stay next to each other.



To the right a well constructed crush.

- Good floor.
- Narrow, so cattle stay behind each other.

6.3 Rule 3 Cont'd: Illustrating a poor crush



A poorly constructed crush with cattle standing next to each other.

6.4 Rule 3 Cont'd: Illustrating a poor crush



7. Rule 4: Prepare the acaricide in the right concentration

- Right concentration for acaricide is key.
- Follow the instructions on the label of the bottle/package.
- Measure the acaricide carefully.
- Measure the amount of water as well.



General guide:

| | |
|------------------|-------------------|
| Amidines | 40 ml in 20 litre |
| Pyrethroids | 20 ml in 20 litre |
| Organophosphates | 10 in 20 litre |

*But always read label.

8. Rule 4: Prepare the acaricide in the right concentration

- Read the instructions on the bottle carefully.
- Remember acaricides or toxins penetrating the skin, so wear protective gloves.



8. Rule 5: Spray at the right frequency

- Always read the label.
- Spray Amidine acaricides twice a week.
- Others once a week.

Key points

- There are many acaricides that have **different trade names but belong to the same family**
- Knowing the family to which an acaricide belongs help in **making appropriate decision on prescription, change and/or rotation**
- It is recommended that acaricides be procured from **licensed veterinary drug outlets**

Proper acaricide use

a. Class of acaricide

Know the class of the acaricide you are using at your farm

Class 1 & 3

Class 3

Class 2

Class 1

Class 1 & 3

Class 3

Class 2

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9. Rule 6: Spray in a correct way

- Spray according to this scheme – BBRH.
 - i. Back
 - ii. Belly
 - iii. Brisket
 - iv. Rear parts
 - v. Head
- Spray from both sides of the crush.
- Make sure not only the hair but also the skin gets wet.



9.1 Rule 6 Cont'd: Spray in a correct way

- A back spray often does not have enough pressure to wet the skin.

With a wide spray, the pressure will be to low.



With a back spray you need 10 litres

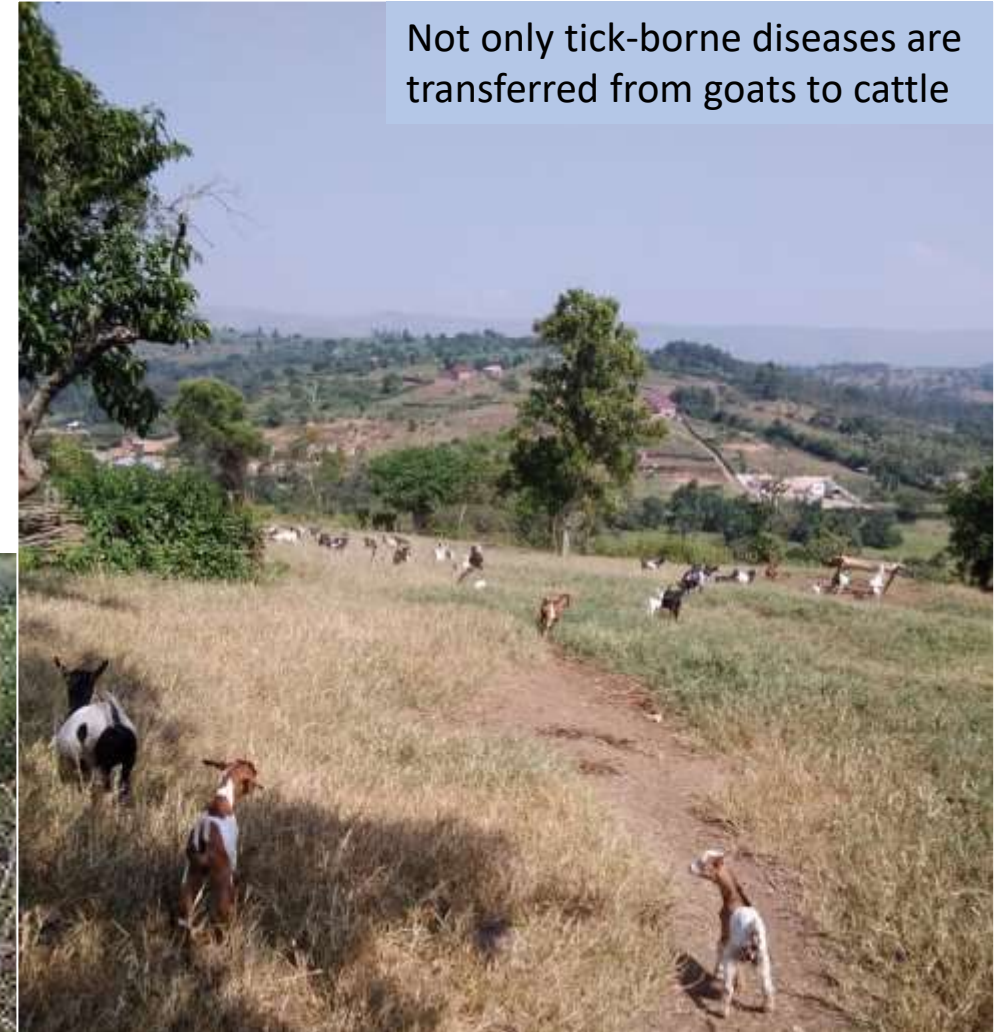


An electric pump will have enough pressure

10. Rule 7: Spray all animals at the farm every spray turn

Also spray;

- Calves
- Goats
- Sheep

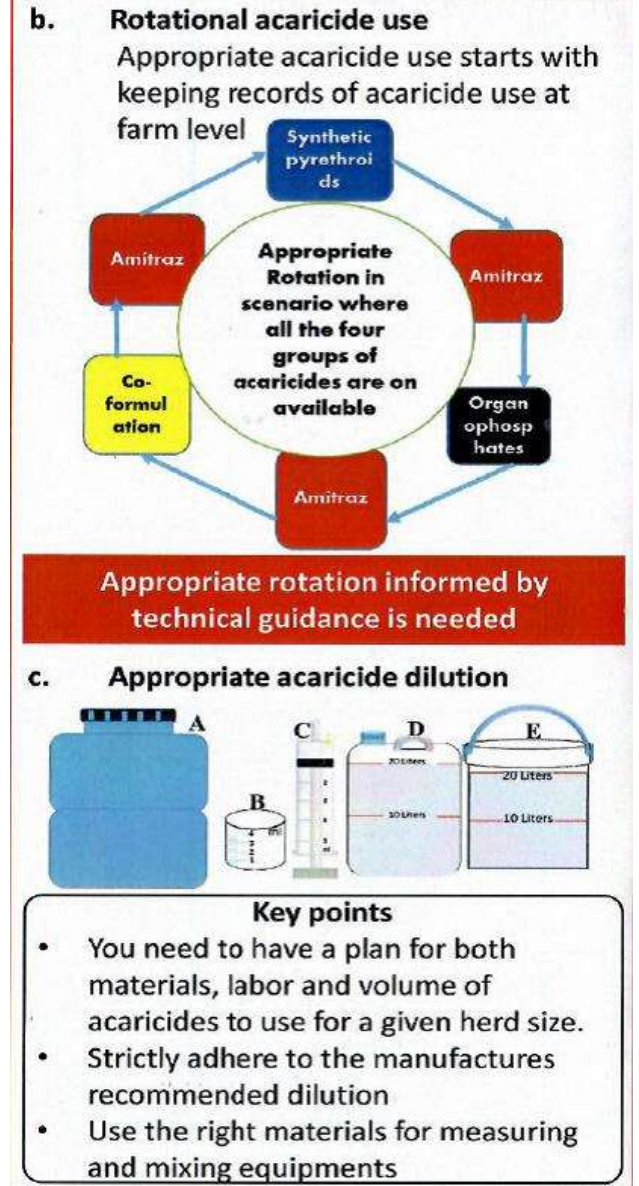


11. Rule 8: Rotate acaricides regularly

- Change acaricides to avoid tick resistance.
- Change from one group of acaricide to the other e.g., Pyrethroids, Organophosphates, Amidines.
- When animals get sick ask your veterinarian or another expert.



These are all amidines



12. Acaricides are poisonous

- Acaricides kill ticks. They are poisonous not only to insects but also to animals and man.
- Avoid skin contact with acaricides. Wear glasses, gloves, boots, cover hair and wear an overall.
- Long term exposure is serious risk to develop cancer.



13. Rule 9: Only use registered acaricides

- It is dangerous to use unregistered acaricides for people and for cattle.
- Registered acaricides work when used appropriately, the 10 golden rule program has proven it.



14. Rule 10: Treat sick animals in time and correctly

- Watch you cattle/herd three times per day.
- Recognize the signs.
- Call a veterinarian in time.



Important note: A dead animal is more costly than a veterinarians bill.

