



# Experiences with natural ways of dairy calf raising

**Tuesday, August 31st 2021**  
**Duration: 120 min**

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**Timing: Netherlands: 10:30AM - 12:30PM,**  
**India: 02:00 - 04:00PM,**  
**Ethiopia: 11:30AM - 01:30PM**



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# HERBAL REMEDIES

*for common*

# CALF DISEASES

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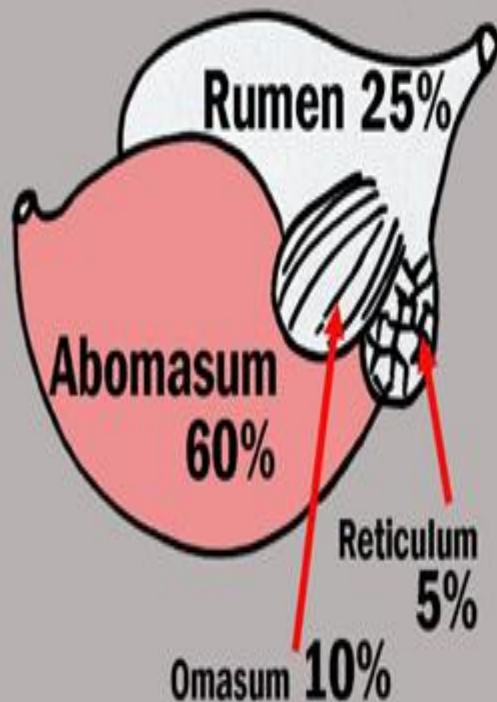


Rear. Produce. Live



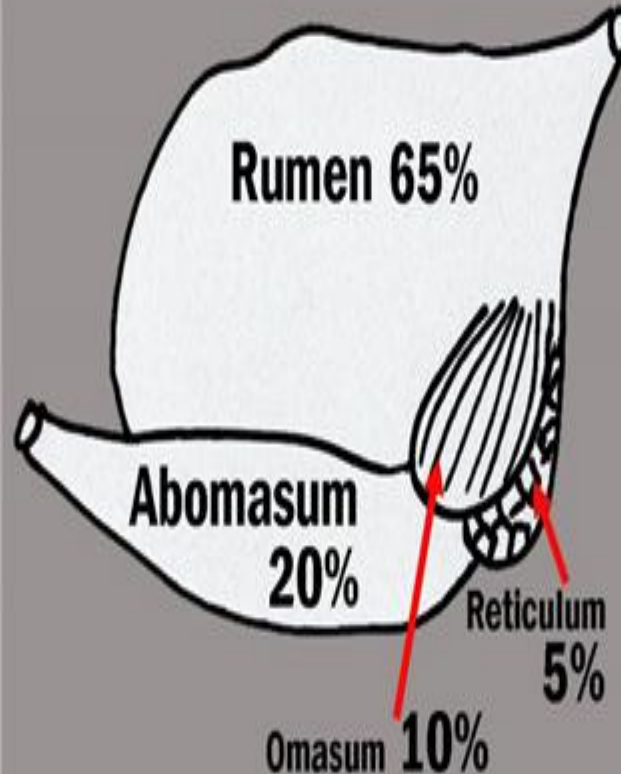
## First week of life

Total combined volume of compartments: 3-4 litres



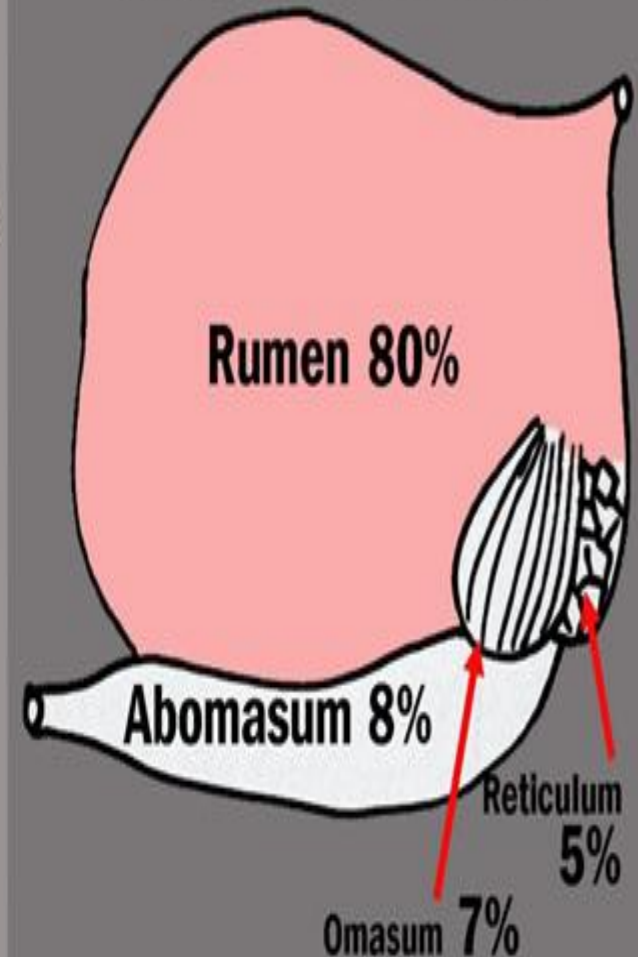
## 12 weeks of age

Total combined volume of compartments: 20-30 litres



## Maturity

Total combined volume of compartments: 150-250 litres



**Neonatal calf diarrhoea (NCD) and bovine respiratory disease (BRD) are the most prevalent diseases affecting pre-weaned dairy calves.**

**NCD and BRD affect 23.9 & 12.4% of pre-weaned Calves in the US respectively (USDA, 2010).**

**Producers cited NCD and BRD as the causes for 56.5 and 22.5% of pre-weaned heifer deaths, respectively (USDA, 2010).**

- Quality **Colostrum** on the day of calving help calves establish their own immune defense mechanism & antioxidant system immediately after birth.

## **Colostrum...**

- promotes intestinal development ,
- reduces the effects of harmful microorganisms and
- prevent calf hood diseases.

**Calf mortality rate.....**

**Reflects the quality of rearing &**

**Welfare of calves in a herd.**

**High mortality in calves means .....**

**Replacement heifers .....Cost**

**New infections ..... Diseases**

**Calf diarrhoea is problematic due to the multifactorial nature of the disease.**

**Prevention and control of calf diarrhoea should be based on a good understanding of the disease complexities such as**

- multiple pathogens,**
- co-infection,**
- environmental factors, and**
- feeding and management during the calving period**

## Diarrhoea that lasts

< 2 weeks is termed **acute diarrhoea**.

**Persistent diarrhoea** lasts **between 2 and 4 weeks**.

**Chronic diarrhoea** lasts **longer than 4 weeks**.

Most cases of **calf scours** < one month of age, **with** the majority occurring between 3 and 16 days of life.

There are a variety of causes of **scours** in **calves**.  
**Most of these are infectious agents.**

Bacteria	Virus	Parasite
<i>Escherichia coli</i>	Rotavirus	Cryptosporidia
<i>Salmonella</i>	Coronavirus	Coccidia
<i>Clostr. perf.</i> <sup>1</sup>	Adenovirus	



Diarrhoea may result from hypersecretion or decreased absorption.

**When a calf has diarrhoea, there is a heavy loss of fluids and electrolytes from its body.**

**The consequent dehydration & the appearance of metabolic acidosis are the main causes of death of the animals.**

## **Antimicrobial agents in diarrhoea .....**

**Antibiotic use is frequent in the treatment of diarrhoea, although few microbes respond to antimicrobials.**

**Viral and parasitic organisms are not directly sensitive to antibiotics.**

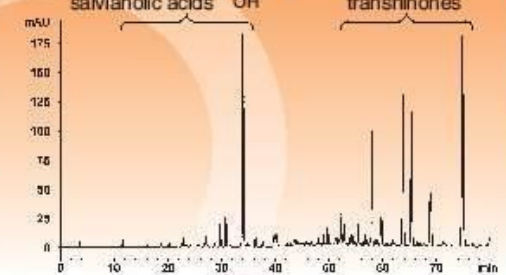
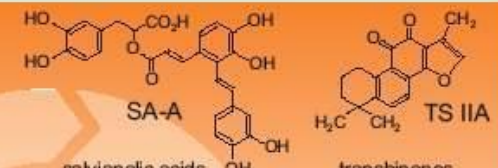
**Their indiscriminate use promotes the selection of resistant strains and complicates future therapeutic efforts.**

**The use of NSAIDs should be restricted in dehydrated animals and administered only when the patient is sufficiently hydrated .**

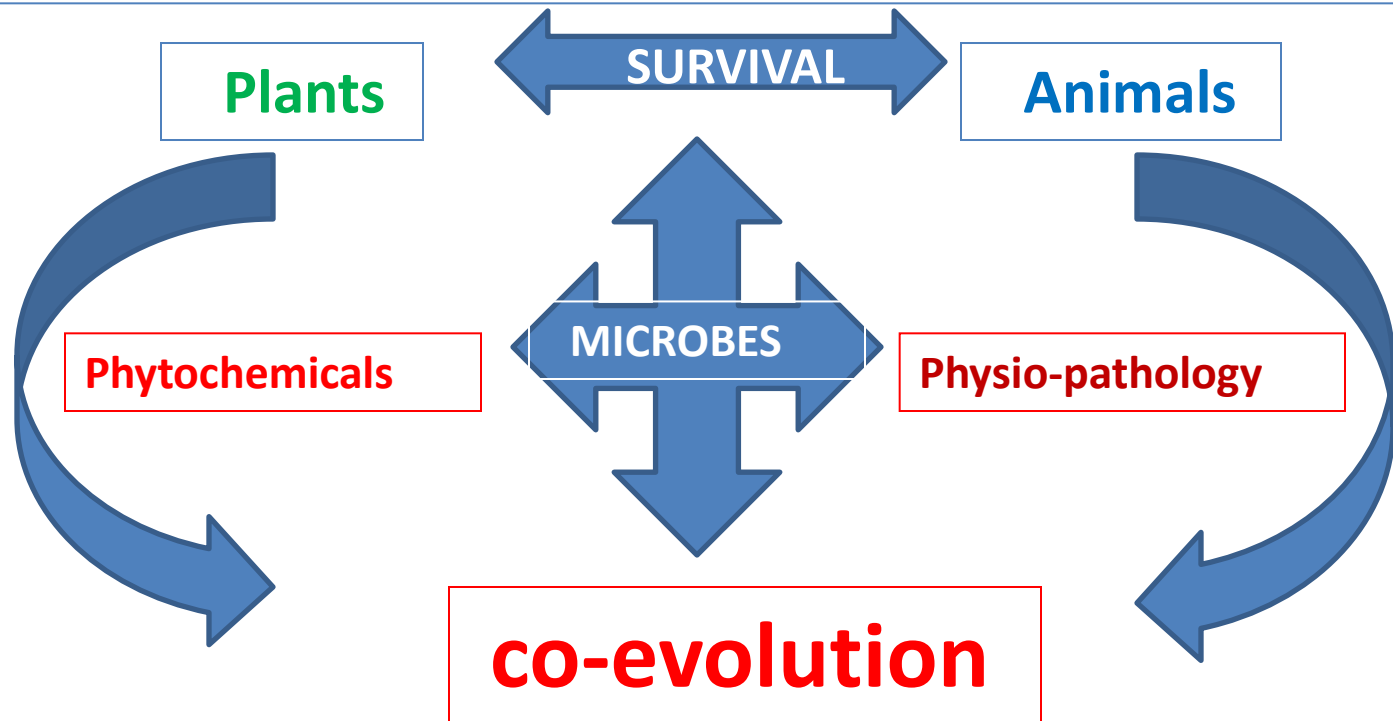
**Use of gastrointestinal motility modifiers is contraindicated, as the reduction in motility will lead to the accumulation of bacteria and pathogenic toxins**

**When either vaccines or effective treatments are not available;**

**Rely on the immune system to clear the host (calf) of infectious agents and disease.**



# INTERACTIONS OF PLANTS / ANIMALS THEIR CO-EVOLUTION with MICROBES



- Survival advantages were conferred upon plants capable of producing noxious bitter-tasting chemicals.
- Animals tolerate the phytochemicals and consume the plants as an energy source



## Defense & Competition

### Herbivores

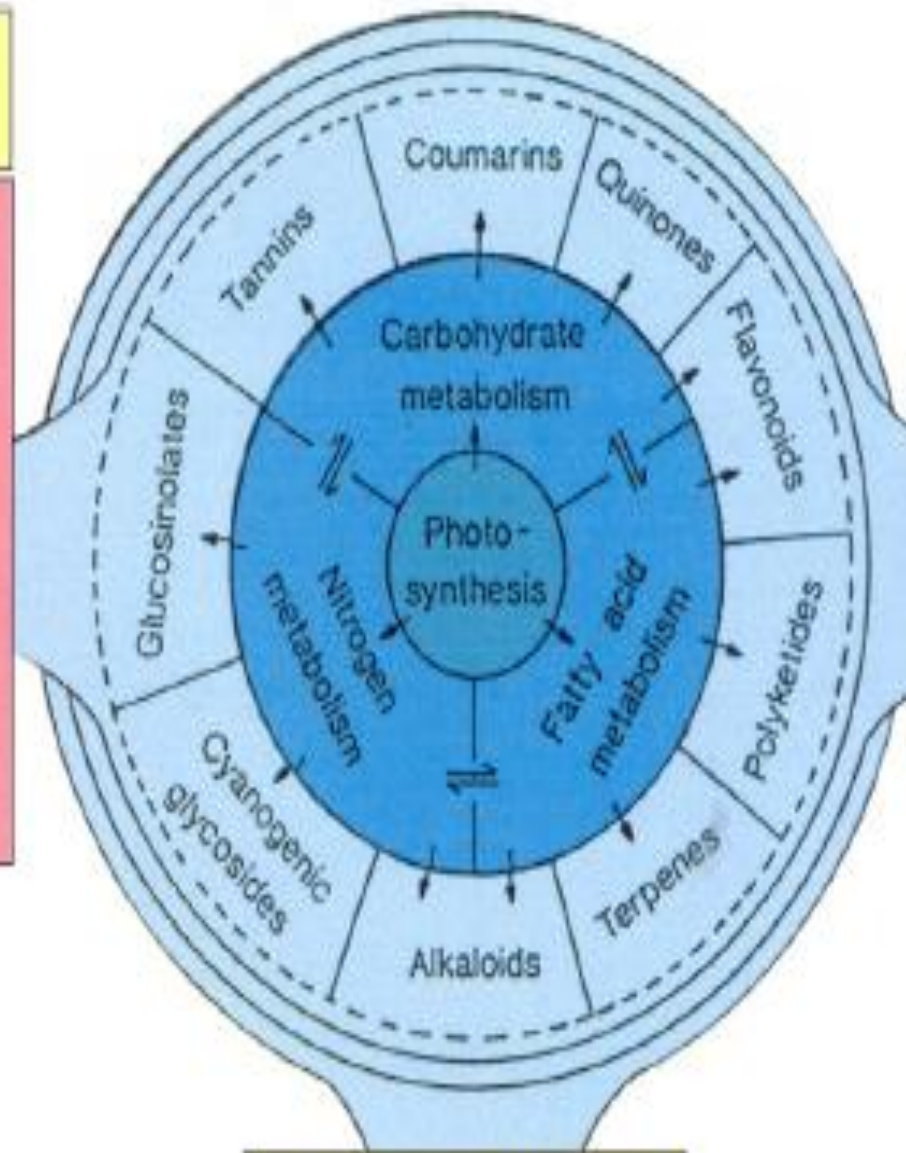
- Arthropods
- Vertebrates
- Invertebrates

### Pathogens

- Viruses
- Bacteria
- Fungi

### Plants

- Allelopathy



## Attraction & Stimulation

### Pollination

### Seed dispersal

### Food-Plant recognition

### Oviposition

### Sequestration

### Symbiosis

- Bacteria
- Fungi

## Abiotic Stress

# Study of natural products in traditional medicine (SiddAyur) involves three main approaches:

- Understanding traditional concepts of (livestock) health and disease;
- Ethno botany: nature, names , habitat & applications of plants used in the traditional systems;
- Ethnopharmacology : suitable chemical /pharmacological analyses of traditional remedies



**Spices are plant parts. They come from woody shrubs and vines, trees, aromatic lichens, and the roots, ...**





# BE A HEALER of your calves - naturally



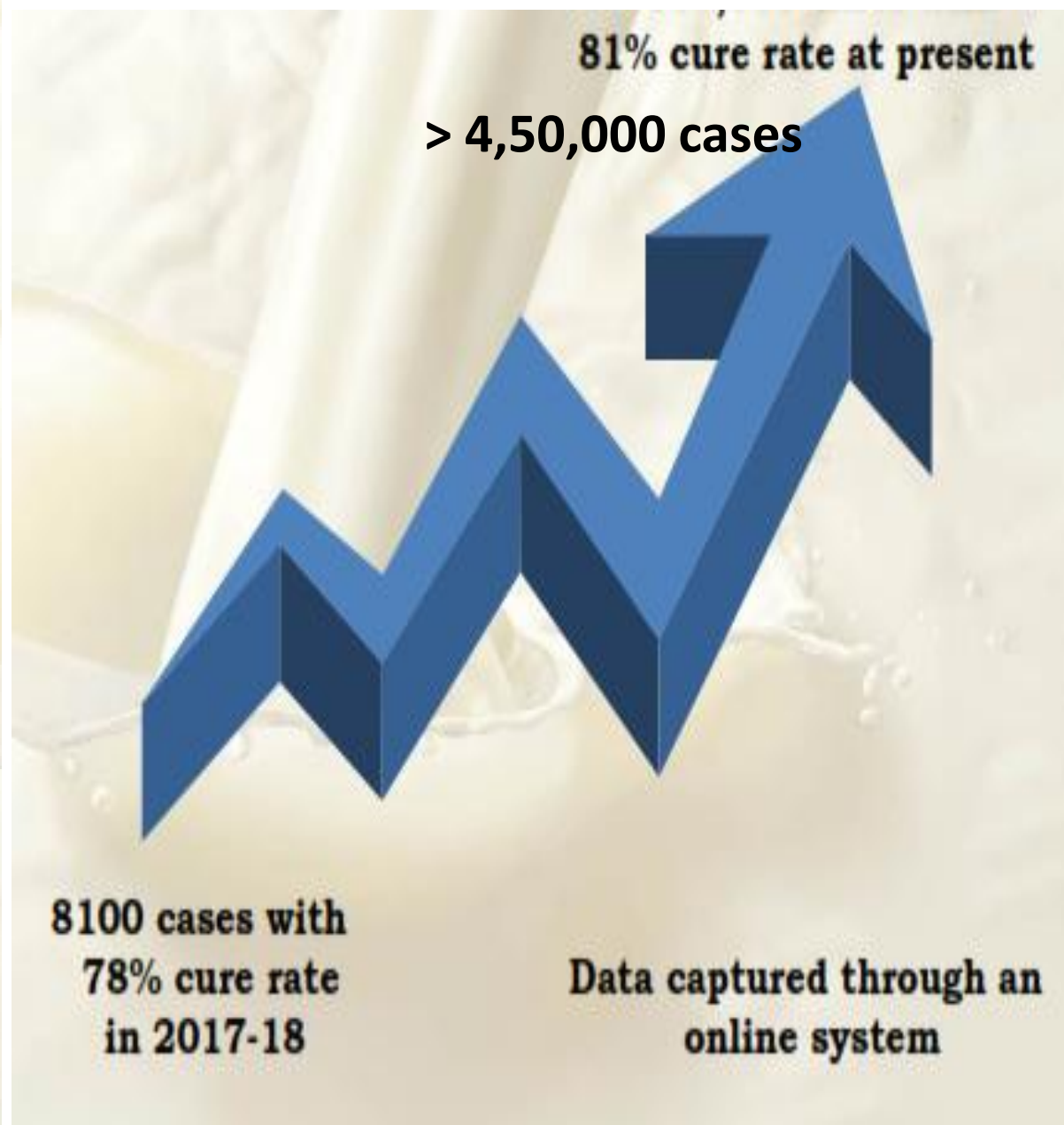


**BE A HEALER of your calves WITH HERBS**





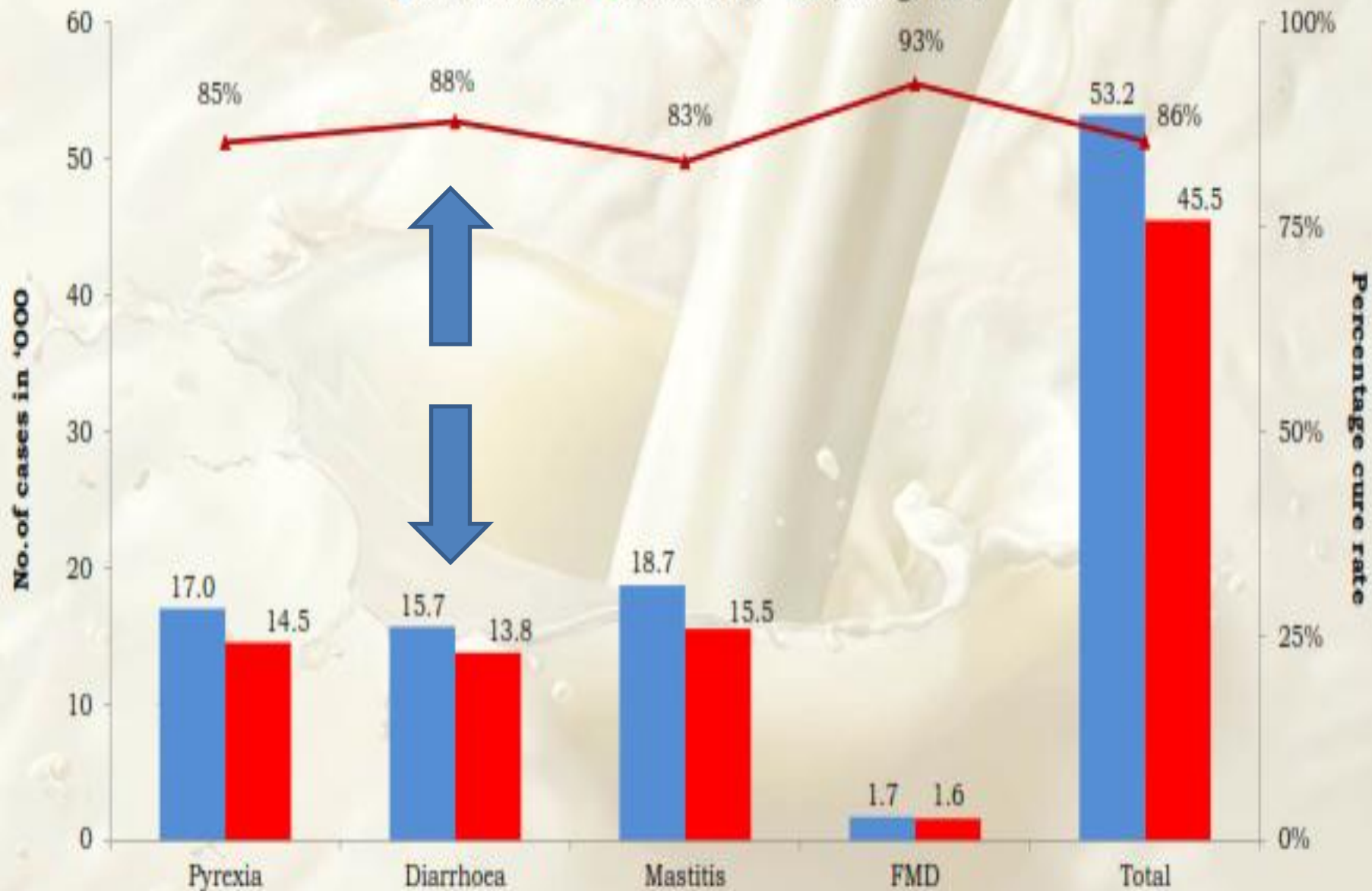
Ailments	Ailments
Mastitis	Retention of placenta
Bloat	Swelling of joints
Blood in milk	Leucoderma
Deworming	Anoestrus
Diarrhoea	Endometritis
Downer	Milk fever
Ectoparasites	Joint ill
Fever	Teilitis
FMD foot lesion	Metritis
Prolapse	Pyometra
Repeat breeder	Cystic ovary
Teat obstruction	Poisoning
Udder Oedema	Indigestion
Wart	Agalactia

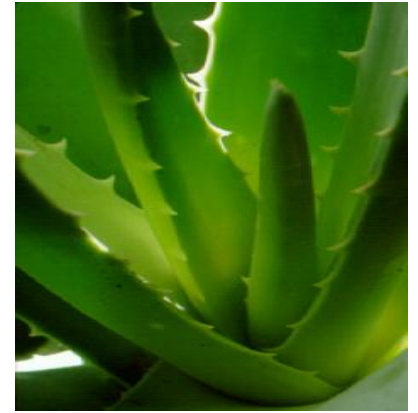




## Recorded by veterinarians

■ Number treated ■ Number cured ▲ Percentage cured





# **ONE-HEALTH** **IS POSSIBLE ONLY THRU'** **HERBAL MEDICINE**

**Prof. N.PUNNIAMURTHY**  
**Translational Scientist**

**THANK YOU**