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September 2016

The top ten diseases reported during September, 2016 are Anthrax, Haemorrhagic Septicaemia, Rabies, Babesiosis, Black Quarter, Fascioliasis, Sheep and Goat pox, Classical Swine Fever, Contagious Caprine Pleuro Pneumonia and Enterotoxaemia. The following Pie chart shows the top ten diseases reported during the month of September, 2016 (Fig 1).

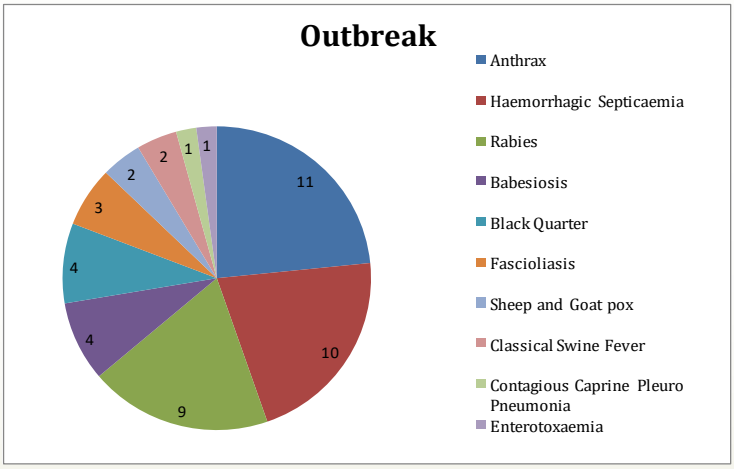


Fig. 1 Top ten diseases reported during September 2016
(Numbers in chart indicate outbreaks)

Anthrax disease has been recorded from two states involving seven districts. Maximum number of outbreaks has been recorded in Karnataka state. Andhra Pradesh is the other state that reported the disease (Fig 2).

Haemorrhagic Septicaemia disease has been recorded from three states involving six districts. Maximum number of outbreaks has been recorded in Karnataka state. Madhya Pradesh and Kerala are the other states that reported the disease (Fig 2).

Rabies disease has been recorded from two states involving four districts. Maximum number of outbreaks has been recorded in Kerala state. Karnataka is the other state that reported the disease (Fig 3).

Babesiosis disease has been recorded from Puducherry Union Territory involving one district.

Black Quarter disease has been recorded from Karnataka state involving four districts (Fig 2).

Fascioliasis disease has been recorded from Puducherry Union Territory and Manipur state involving two districts. Maximum number of outbreaks has been recorded in Puducherry Union Territory.

Sheep and Goat Pox disease has been recorded from Karnataka and Kerala states, with equal number of outbreaks, involving two districts (Fig 3).

Classical Swine Fever disease has been recorded from Manipur state involving two districts. (Fig 3).

Contagious Caprine Pleuro Pneumonia has been recorded from Himachal Pradesh involving one district (Fig 2).

Enterotoxaemia has been recorded from Rajasthan involving one district (Fig 2).

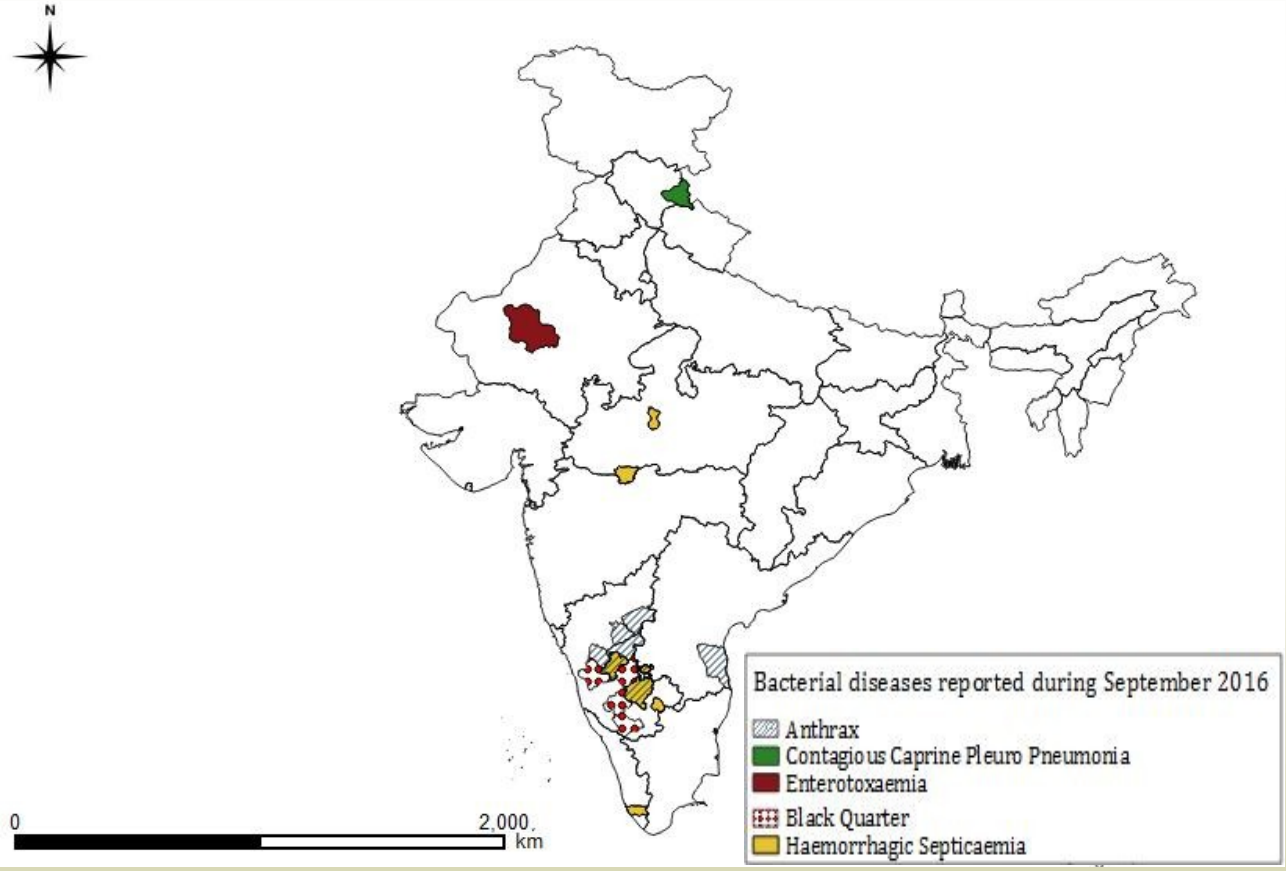


Fig. 2 Spatial distribution of bacterial diseases reported during September 2016

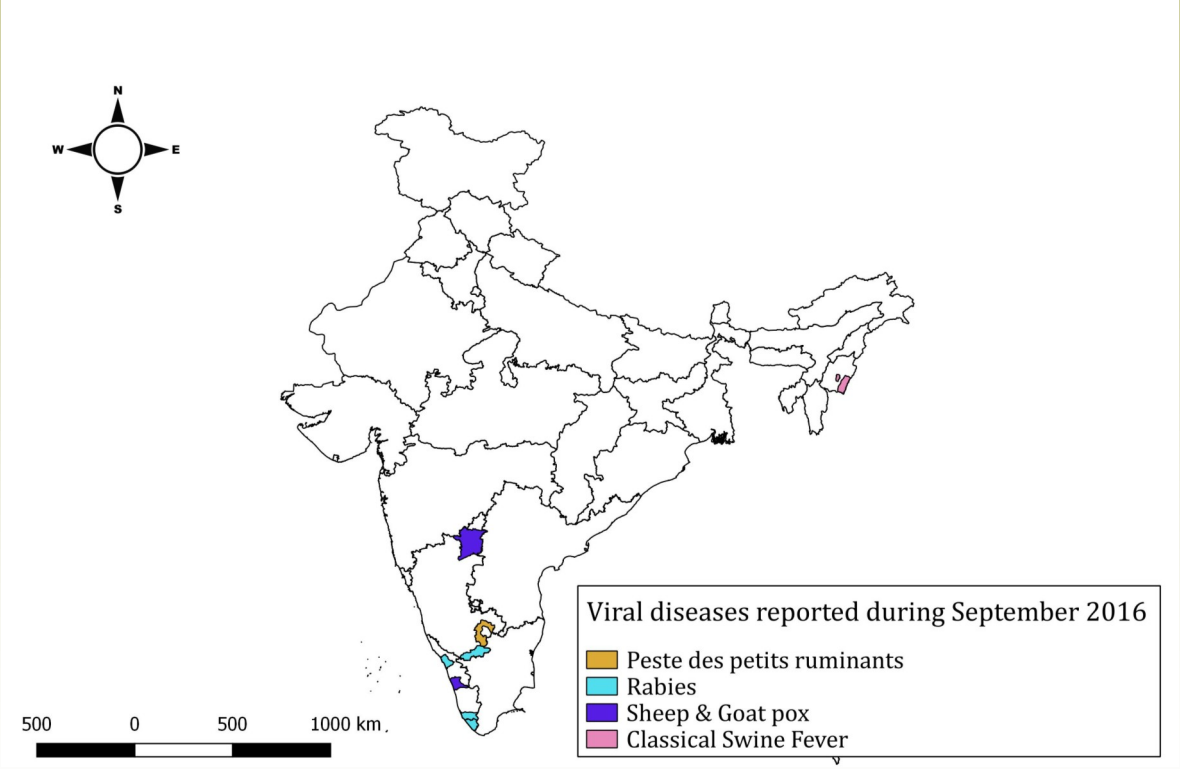


Fig. 3 Spatial distribution of viral diseases reported during September 2016

Table.1 State wise disease reports for September, 2016

State	Diseases Reported
Andhra Pradesh	Anthrax (Sheep)
Himachal Pradesh	Contagious Caprine Pleuro Pneumonia (Goat)
Karnataka	Anthrax (Sheep, Cattle); Black Quarter (Cattle); Haemorrhagic Septicaemia (Buffalo, Cattle, Sheep); Peste des petits ruminants (Sheep); Rabies (Cattle); Sheep & Goat pox (Goat)
Kerala	Haemorrhagic Septicaemia (Goat); Rabies (Cattle, Canine, Goat); Sheep & Goat pox (Goat)
Madhya Pradesh	Haemorrhagic Septicaemia (Goat, Cattle)
Manipur	Fascioliasis (Cattle); Classical Swine Fever (Pig)
Puducherry	Babesiosis (Cattle); Fascioliasis (Cattle)
Rajasthan	Enterotoxaemia (Sheep); Trypanosomiasis (Cattle)

Note: * The livestock species in the bracket indicates the occurrence of the disease in those species of livestock during the reporting month in respective states

News

7 September 2016: Karnataka State Government orders killing of 49 cows affected with Brucellosis

The Karnataka Government has ordered culling of 49 cows at a farm in Kolar district, Karnataka due to detection of dreaded "Brucellosis" disease in the animals. The farm has about 1000 cows. Blood samples tested found positive and a team of veterinarians also visited the farm recently and confirmed the infection. (ECTAD, Vol. 05, No. 36, 08 September 2016)

12 Sept 2016: Brucellosis hits veterinarians in Kerala and KVASU decides to cull affected cattle in the farm

Many veterinarians, especially youngsters, have been affected by Brucellosis that has gripped a large number of cattle at the veterinary university's Thiruvazhamkunnu farm in Palakkad. The Kerala Veterinary and Animal Sciences University (KVASU) in an emergency meeting decided to cull cattle that have contracted Brucellosis at its Thiruvizhamkunnu farm in Palakkad district. 30% of the farm animals were affected (ECTAD, Vol. 05, No. 37, 15 September 2016).

14 Sept 2016: Anthrax caused jumbo deaths in Similipal

A calf and an adult elephant, whose carcasses were found near Gudgudia under Karanjia forest division in Similipal Tiger Reserve two days ago, died of anthrax. The diagnosis was made at Animal Disease Research Institute, Phulnakhara, Cuttack (ECTAD, Vol. 05, No. 37, 15 September 2016).

15 September 2016: Andhra Pradesh declared 'free' of foot-and-mouth disease

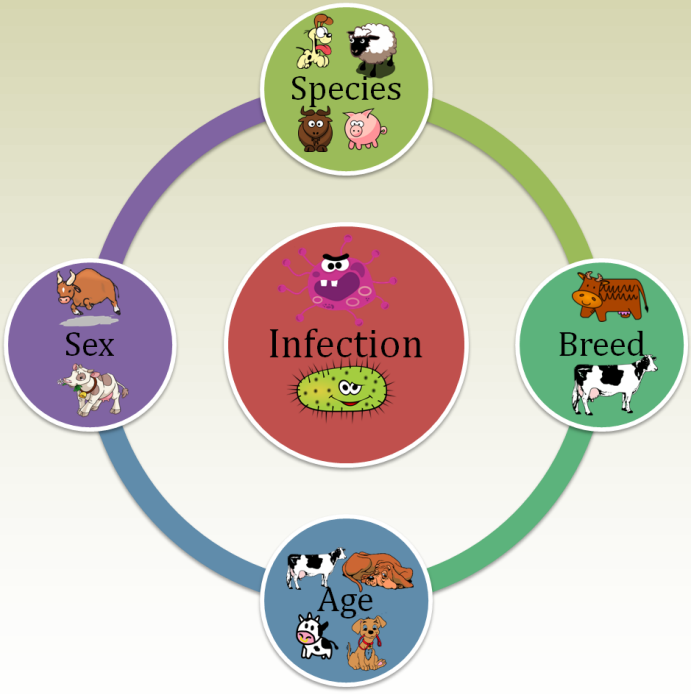
Andhra Pradesh has become the first state in the country to be declared free from foot-and-mouth disease (FMD) that afflicts milch cattle and other animals. The state has not reported any new cases of FMDin the last two years. The state government on 14th September, issued a notification declaring that the state is free from FMD. The notification was issued under sub-section (5) of section 6 of the Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009. According to Andhra Pradesh animal husbandry department, there was no outbreak of the disease in cows, buffaloes and pigs in the last two years. The central government has decided to eradicate the FMD by 2025 and if AP continued to maintain zero-reporting for another five years, the state would be the first to have eradicated FMD. (http://timesofindia.indiatimes.com/city/hyderabad/Andhra-Pradesh-declared-free-of-foot-and-mouth-disease/articleshow/54339008.cms)

15 Sept 2016: Cattle farm in Kolar tested positive for Brucellosis

As many as 19 heads of cattle, including two calves, from the dairy farm in Kolar, Karnataka were tested positive for Brucellosis, an infectious disease caused by Brucella bacteria. The Indian Animal Health and Veterinary Biologicals (IAHVB) confirmed the disease. There are as many as 891 heads of cattle in the farm (ECTAD, Vol. 05, No. 38, 22 September 2016).

Epidemiology concept

Host Determinants– Intrinsic determinants



The main intrinsic determinants that influences the appearance of a disease include Species, Breed, Age and Sex.

Species susceptibility

Most of the disease causing agents can infect wide range of species including vertebrates and invertebrates, but the severity of infection/disease varies from species to species. A few agents are restricted to just one host species. For example PRRS virus that cause respiratory and reproductive disorder in swine, is not found to affect any other animal than swine.

Breed susceptibility

Wide range of susceptibility for an agent is observed in different breeds of a host species. For example, in Africa, certain breeds of cattle, horses, sheep and goats are more tolerant of trypanosomiasis than others. *Bos taurus* breeds of cattle are generally more susceptible to ticks and tick-borne diseases than *Bos indicus.* Within breeds too, differences in susceptibility to the same disease agent have been noted between strains or families.

Age susceptibility

Often, differences in susceptibility of a disease is observed between different age groups. For example, young animals are generally less susceptible to tick-borne diseases than older animals. There is, however, often a problem in distinguishing between true age resistance in young animals and passive resistance occasioned by the transfer of maternal antibodies via the placenta or in the colostrum.

Sex associations in disease

In these associations the clinical signs of disease are associated with sexual attributes, as in the case of diseases of the reproductive tract, rather than with the fact that males may be more susceptible than females or vice versa. Sometimes, too, one particular sex may be regarded by farmers as being of greater value than the other and will therefore receive a correspondingly greater amount of care and attention when sick.

Answers for Crossword Aug16 in Vol. 3 Issue 22, August 2016

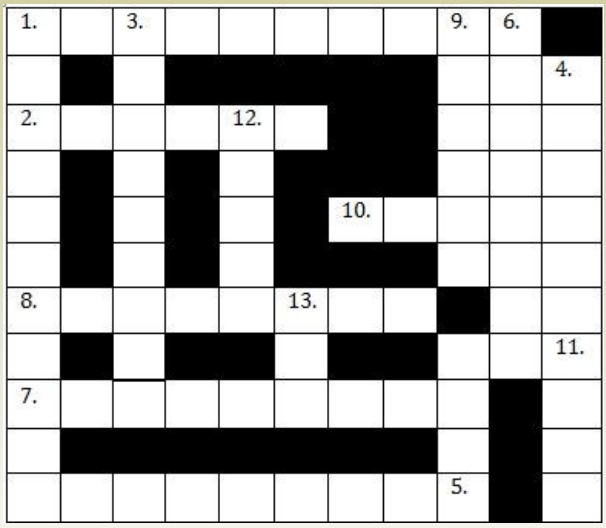
Across:

1. Prevalence; 2. Exposure; 4. Nominal; 5. Triad; 7. Efficiency; 8. Masking; 11. Albo

Down:

1. Percentile; 3. Epidemic; 6. Enterotomy; 9. Null; 10. BAC

Epidemiology Cross Word Puzzle– Sep16



Across

1. An agent that transmits bluetongue disease (10)

2. _____ scale is a set of categories designed to elicit information about a quantitative or a qualitative attribute (6)

5. Limiting movement of or separating people who are ill with a contagious disease (Inverted) (9)

7. It is an acute contagious disease characterized by high fever and respiratory symptoms (9)

8. A disease in dogs that is also known as hypoadrenocorticism (7)

10. A traditional model of infectious disease causation is known as the Epidemiologic _____ (5)

11. Increase in this platelet parameter of overall platelet mass is potentially associated with hypercoagulable state (Inverted, Abbreviation) (3)

Down

1. Interdependence of variable quantities (11)

3. _____ is used together with longitude to specify the precise location of features on the surface of the Earth. (8)

4. A member of genus Morbillivirus, causes an acute and fatal disease in cattle and other large ruminants (10)

5. One of the earliest attempts to describe the role of multiple factors in determining environmental degradation (Inverted) (4)

6. Zoonoses that has reservoirs among the wild or feral animals, free living and captive animals, and transmission of those diseases to the human population (8)

9. A type of tumor that comes from the mucous membranes in the gums (6)

12. An opening in the nasal cavity; also referred to as the nostril (5)

13. Former name of World Organization for Animal Health, abbreviated (3)