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June 2016

The top ten diseases reported during June, 2016 are Anthrax, Rabies, Haemorrhagic septicaemia, Enterotoxaemia, Foot and Mouth disease, Black quarter, Peste des petits ruminants, Sheep and Goat pox, Theileriosis and Contagious Caprine Pleuro Pneumonia. The following Pie chart shows the top ten diseases reported during the month of June, 2016 (Fig 1).

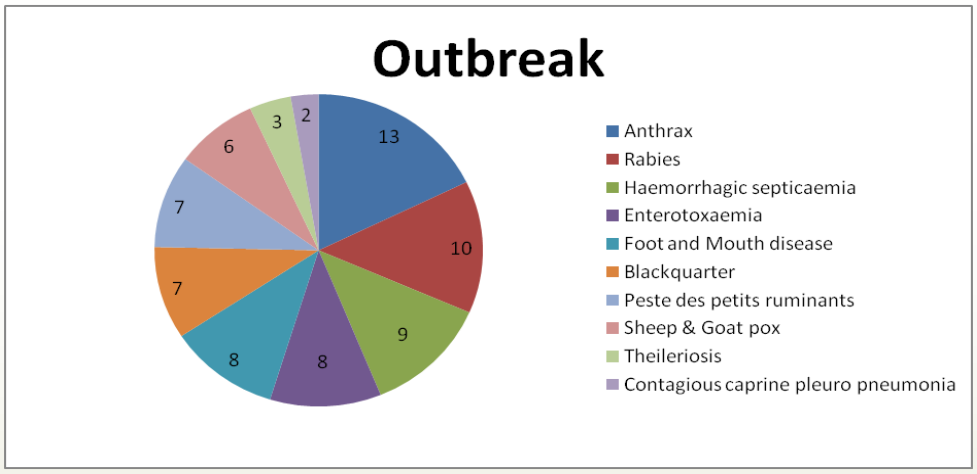


Fig. 1 Top ten diseases reported during June 2016
(Numbers in chart indicate outbreaks)

Anthrax disease has been recorded from four states involving six districts. Maximum number of outbreaks has been recorded in Odisha state. Karnataka, Andhra Pradesh and Tamil nadu are the other states that reported the disease (Fig 2).

Rabies disease has been recorded in Kerala state involving three districts (Fig 3).

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

Enterotoxaemia disease has been recorded from three states involving five districts. Maximum number of outbreaks has been recorded in Karnataka state. Haryana and Assam are other states that reported the disease (Fig 2).

Foot and Mouth disease has been recorded from Kerala state involving three districts (Fig 3).

Black quarter disease has been recorded from three states involving seven districts. Maximum number of outbreaks has been recorded in Karnataka state. Assam and Odisha are the other states that reported the disease (Fig 2).

Peste des petits ruminants disease has been recorded from three states and involving five districts. Maximum number of outbreaks has been recorded in Karnataka and Haryana state. Madhya Pradesh is the other state that reported the disease (Fig 3).

Sheep & Goat pox disease has been recorded from two states involving four districts. Assam and Karnataka has reported equal number of outbreaks (Fig 3).

Theileriosis disease has been recorded from two states involving three districts. Maximum number of outbreaks has been recorded in Assam state. Haryana is the other state that reported the disease.

Contagious Caprine Pleuro Pneumonia disease has been recorded from Kerala state involving one district (Fig 2).

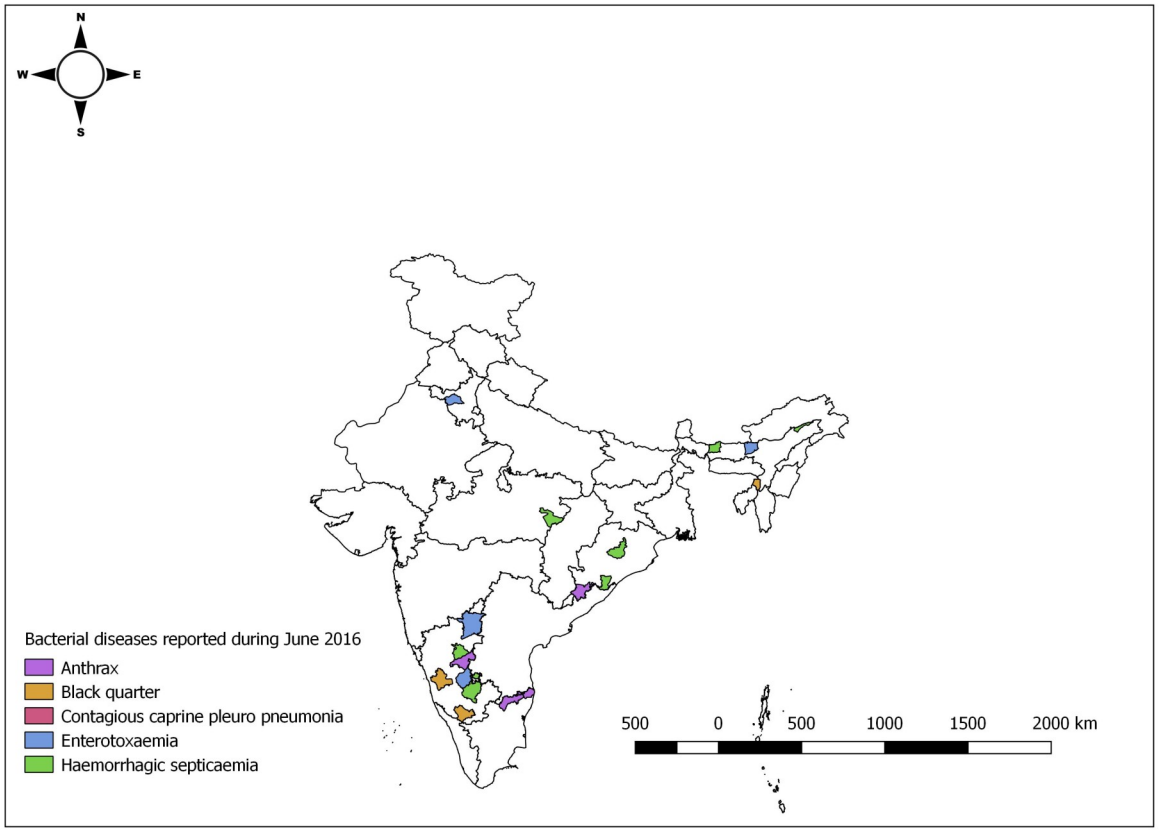


Fig. 2 Spatial distribution of bacterial diseases reported during June 2016

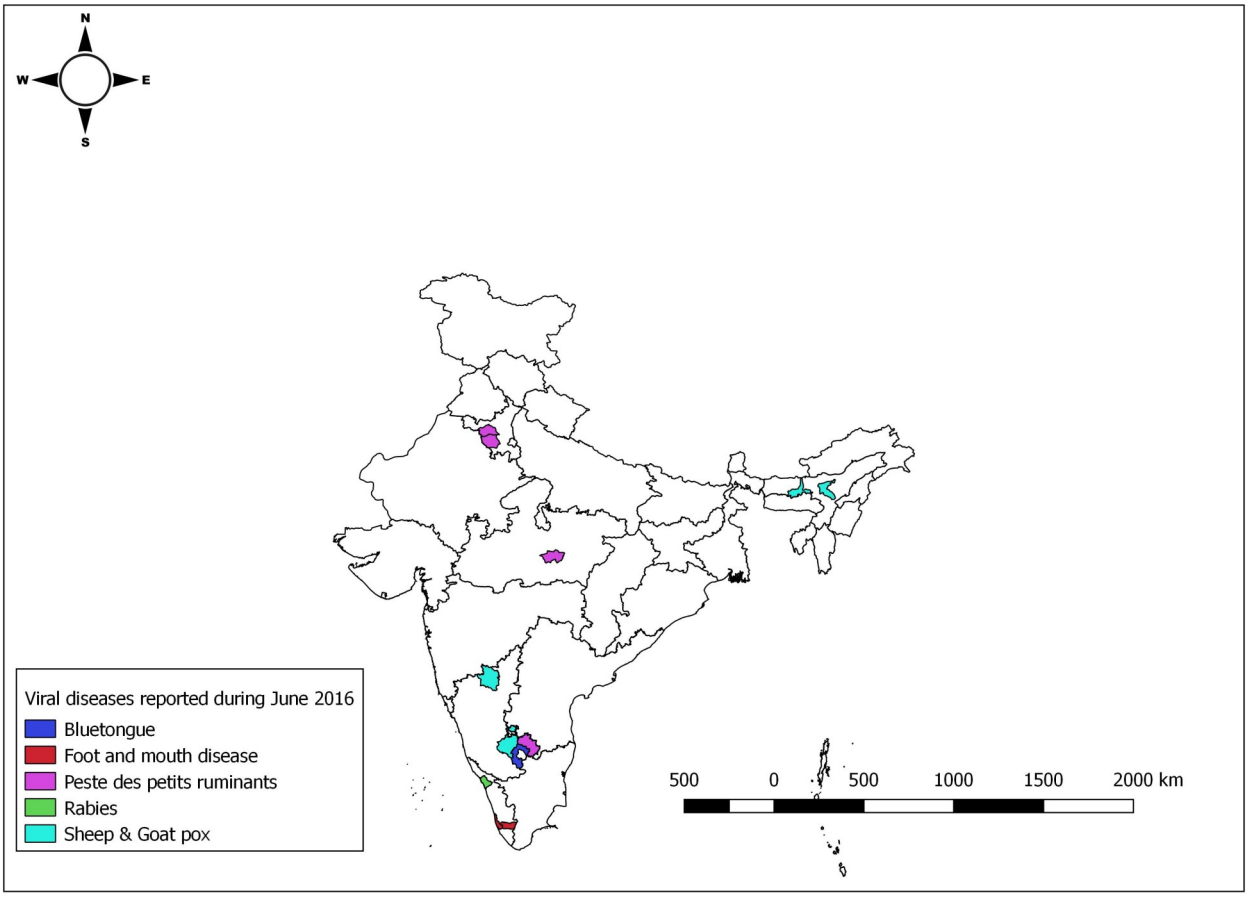


Fig. 3 Spatial distribution of viral diseases reported during June 2016

Table.1 State wise disease reports for June, 2016

State	Diseases Reported
Andhra Pradesh	Anthrax (Sheep)
Assam	Black quarter (Cattle), Enterotoxaemia (Goat), Haemorrhagic septicaemia (Cattle), Sheep & Goat pox (Goat), Theileriosis (Cattle)
Haryana	Enterotoxaemia (Goat), Peste des petits ruminants (Sheep/Goat), Theileriosis (Cattle)
Karnataka	Anthrax (Sheep, Cattle), Black quarter (Cattle), Bluetongue(Sheep), Enterotoxaemia (Goat,Sheep), Haemorrhagic septicaemia (Cattle, Sheep, Goat), Peste des petits ruminants (Sheep,Goat), Sheep & Goat pox (Goat, Sheep)
Kerala	Contagious caprine pleuro pneumonia (Goat), Foot and mouth disease (Cattle), Rabies (Canine, Cattle),
Madhya Pradesh	Haemorrhagic septicaemia (Cattle), Peste des petits ruminants (Goat)
Odisha	Anthrax (Goat, Cattle), Black quarter (Cattle), Haemorrhagic septicaemia (Cattle, Goat)
Tamil Nadu	Anthrax (Cattle)
Uttar Pradesh	Babesiosis (Cattle)

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

News

Foot-and-mouth disease claims five barasinghas (swamp deer) in 15 days in Jaldapara National Park

19 June 2016: At least five barasinghas have died due to "foot-and-mouth-disease n the past fortnight at Jaldapara National Park. The first swamp deer died on May 29. The deaths occurred in a special enclosure where the endangered antelopes have been housed under captive breeding programme. Spray of disinfectant around the enclosure has been done to prevent the further spread of disease. (ECTAD*, Vol. 05, No. 25, 23 June 2016).

Achievements at National Institute of Veterinary Epidemiology and Disease Informatics

23 June 2016: National animal disease referral expert system (NADRES) which is web a based dynamic and interactive livestock disease relational database supported by GIS and includes the disease forecasting module. The data from 609 district have been linked to GIS software for disease monitoring and surveillance. EpiInfo(c) software of CDC Atlanta, USA has been optimized to design the epidemiological studies and subsequent analysis in the country ultimately to guide policy and operational decision making. (ECTAD*, Vol. 05, No. 25, 23 June 2016).

Leptospirosis hits 6 as monsoon barely sets in Mumbai

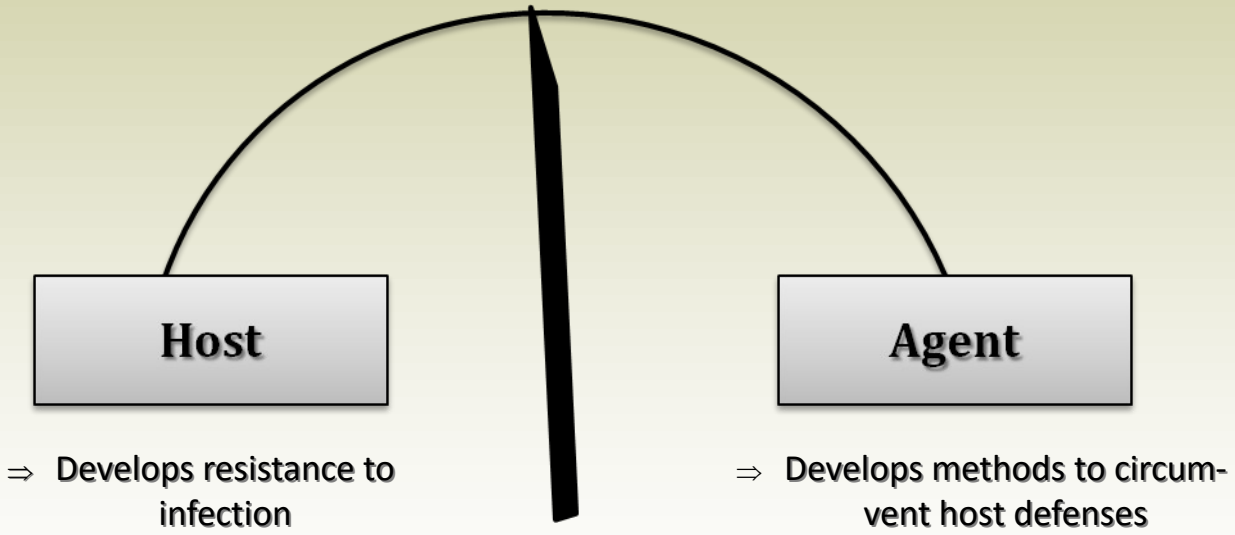
22 June 2016: According to the Daily Times of India, The leptospirosis usually associated with wading in floods has affected six people in Mumbai and this number was four during the corresponding month of June last year. This situation has emerged as a big concern for health officials. It had killed 12 Mumbaikars in the first week of July 2015 and 20 cases have been detected between January and May 2016 Leptospira is a bacteria that is shed by infected animals such as cattle, dogs and rats in their urine; people get leptospirosis when they wade through flood water contaminated with the urine of infected animals (ECTAD*, Vol. 05, No. 26, 30 June 2016).

Mare tested positive for glander in Baghpat, Uttar Pradesh

26 June 2016: According to The Indian Express, A mare in Baghpat District of Uttar Pradesh has been euthanized (killed) under the provision of Glanders and Farcy Act 1899 and Prevention and Control of Infectious and Contagious Disease in Animals Act, 2009, as the samples from the mare were tested positive for glanders at National Research Centre on Equines (NRCE) in Hisar. Since the bacteria causing glanders in animals can infect humans and the disease is considered "fatal" therefore the state's animal husbandry department has imposed restrictions on the movement of equine animals and sounded alert in Baghpat and adjoining districts, including Ghaziabad and Meerut. (ECTAD*, Vol. 05, No. 26, 30 June 2016).

Epidemiology concept

Host/agent relationships



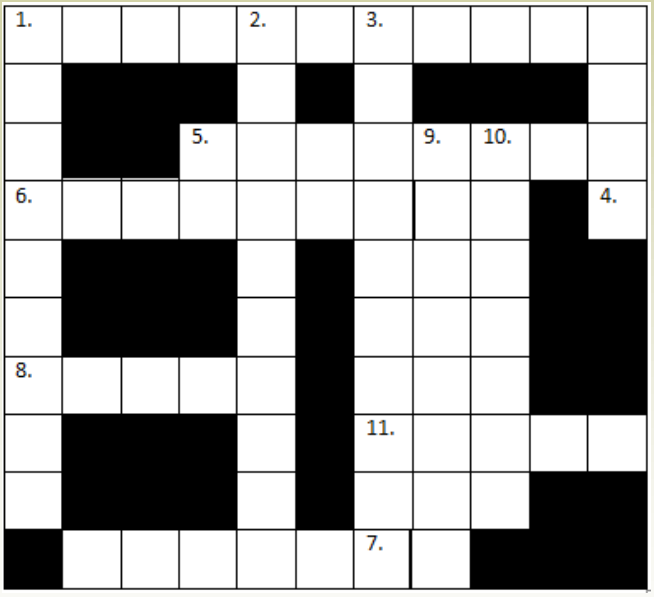
Disease outbreaks caused by the introduction of an agent into a susceptible host population which has not been previously exposed to that agent normally result in a disease of high pathogenicity with commensurate severe losses in the host population.
Such a process is actually detrimental to the agent's survival, since by killing off the host population it adversely affects both its ability to reproduce and its chances of gaining access to new susceptible hosts.
An agent can therefore improve its chances of survival by increasing its infectivity and decreasing its pathogenicity, and some agents have a natural tendency to do this under certain circumstances.

Answers for crossword mentioned in Vol. 3 Issue 17-19, Mar 2016 – May 2016

Across:
1. Sampling; 2. Odds ratio; 3. Box plot; 4.Type1

Down:
1. Syndrome; 3. Biopsy; 5. Morbidity; 6. Poisson; 7. SAS rule; 8. Logistic

Epidemiology Cross Word Puzzle



Across:

1. The degree to which two or more measurements show a tendency to vary together. (11)
5. Any characteristics, number, or quantity that can be measured or counted (8)
6. A visual display of the specific data points of a variable that has a finite number of values, such as race or sex (3,4)
7. The enumeration of an entire population, usually including details on residence, age, sex, etc (6, inverted)
8. The organism responsible for a disease (5)

Down:

1. The rate calculated for an entire population (5,4)
2. Systematic and objective examination of activities to determine how relevant and effective they are (10)
3. _____ mean is obtained by adding all the scores and dividing it by total number of scores (10)
4. The measure of central location commonly called the average (4, inverted).
9. The spread of an infection by droplets or dust, with a particle spread of more than three feet through the air (8)
10. Having two modes or 2 maxima (7)