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ICAR-NIVEDI



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August 2016

The top ten diseases reported during August, 2016 are Haemorrhagic septicaemia, Peste des petits ruminants, Enterotoxaemia, Bluetongue, Rabies, Black quarter, Anthrax, Fascioliasis, Classical swine fever and Sheep and Goat pox. The following Pie chart shows the top ten diseases reported during the month of August, 2016 (Fig 1).

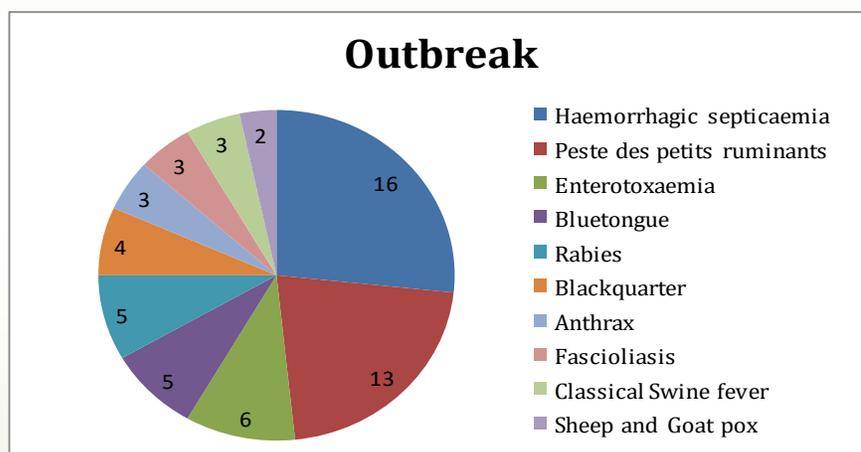


Fig. 1 Top ten diseases reported during August 2016
(Numbers in chart indicate outbreaks)

Haemorrhagic Septicaemia disease has been recorded from five states involving ten districts. Maximum number of outbreaks has been recorded in Madhya Pradesh state. Assam, Andhra Pradesh, Kerala and Haryana are the other states that reported the disease (Fig 2).

Peste des petits ruminants disease has been recorded from four states and involving seven districts. Maximum number of outbreaks has been recorded in Andhra Pradesh state. Assam, Haryana and Odisha are the other states that reported the disease (Fig 3).

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

Bluetongue disease has been recorded from Andhra Pradesh state involving two districts (Fig 3).

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

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

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

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

Classical Swine fever disease has been recorded from two states involving two districts. Kerala has reported more outbreaks than Haryana (Fig 3).

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

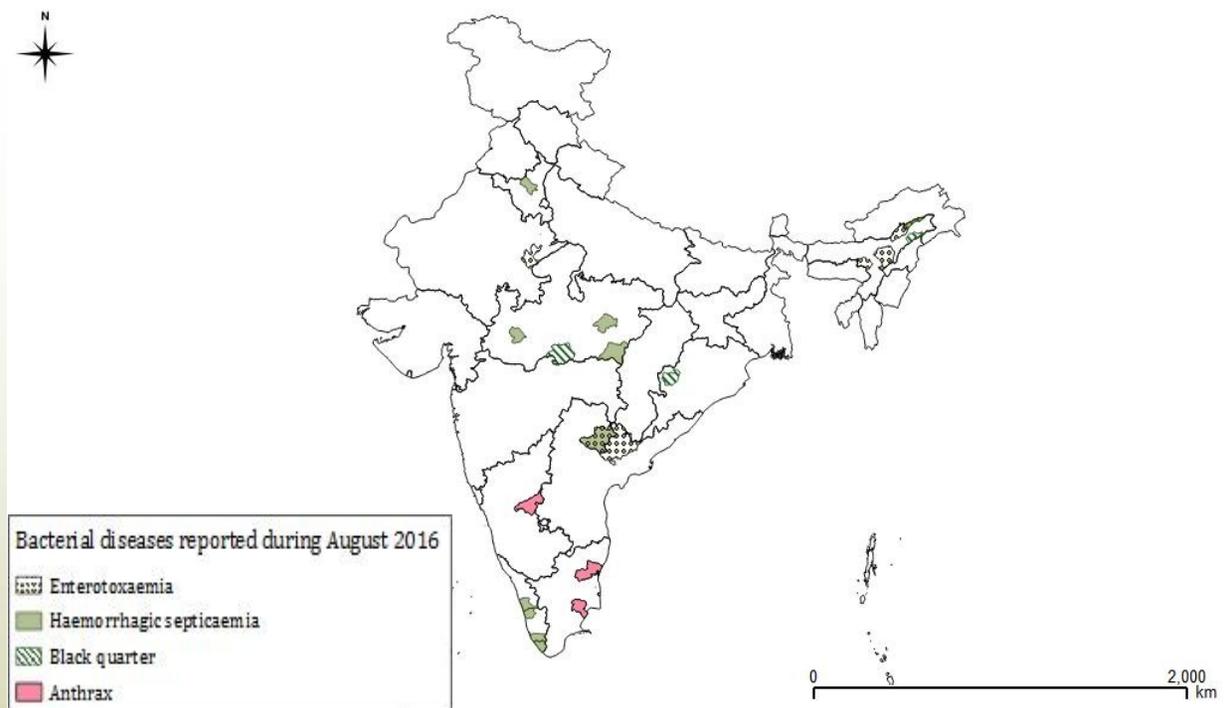


Fig. 2 Spatial distribution of bacterial diseases reported during August 2016

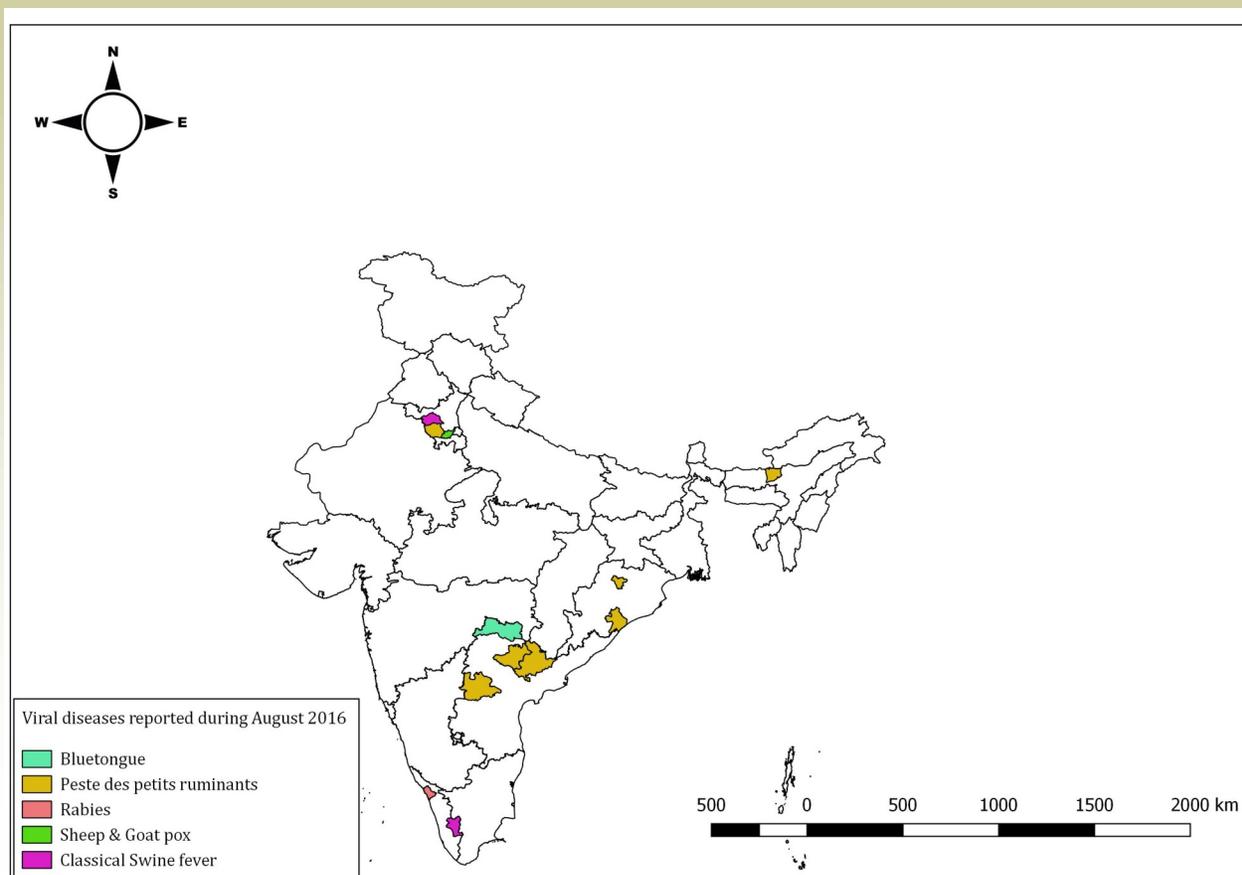


Fig. 3 Spatial distribution of viral diseases reported during August 2016

Table.1 State wise disease reports for August, 2016

State	Diseases Reported
Andhra Pradesh	Bluetongue (Sheep,Goat), Enterotoxaemia (Sheep), Haemorrhagic septicaemia (Cattle), Peste des petits ruminants (Goat, Sheep)
Assam	Black quarter (Cattle), Enterotoxaemia (Goat), Haemorrhagic septicaemia (Cattle), Sheep & Goat pox (Goat), Peste des petits ruminants (Goat)
Haryana	Haemorrhagic septicaemia (Buffalo), Peste des petits ruminants (Goat), Sheep and Goat pox (Sheep), Classical Swine fever (pig)
Karnataka	Anthrax (Sheep)
Kerala	Rabies (Canine, Cattle), Haemorrhagic septicaemia (Cattle, Goat), Swine fever (pig)
Madhya Pradesh	Haemorrhagic septicaemia (Cattle, Buffalo), Black quarter (Cattle)
Odisha	Black quarter (Cattle), Peste des petits ruminants (Goat)
Puducherry	Fascioliasis (Cattle), Trypanosomiasis (Buffalo)
Rajasthan	Enterotoxaemia (Sheep)
Tamil Nadu	Anthrax (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

1 August 2016: Anthrax 'contained' in Ambur village, Tamil nadu

More than 8,500 livestock have been vaccinated in and around the affected village of Bairapalli in Mittalam, Tamil nadu following the death of an animal due to anthrax attack in the last week of July. In Bairapalli alone, 1,209 cattle, 744 sheep and, 311 goats have been vaccinated so far. In the surrounding villages, the teams vaccinated 2,891 cattle, 86 buffaloes, 1,914 sheep and 1,677 goats. The officials created awareness among farmers on the symptoms of anthrax in the livestock. This included sudden death and bleeding including from the rectum and vagina. (<http://www.thehindu.com/news/national/tamil-nadu/anthrax-contained-in-ambur-village/article8927186.ece>)

8 August 2016: Disease claims hundreds of cows in Jaisalmer villages

According to some reports, hundreds of cows in many villages including Kathodi in Jaisalmer district have succumbed to some disease. In Kathodi village, more than 500 cows have died in a span of few days. Animal husbandry department has confirmed the death of over 150 cows in this village. The district collector has directed the officials to stop the disease from spreading. As one enters Kathodi the stench of the carcasses is too strong to ignore. Kathodi is a mere 32 km away from Jaisalmer (<http://timesofindia.indiatimes.com/city/jaipur/Disease-claims-hundreds-of-cows-in-Jaisalmer-villages/articleshow/53591911.cms>)

9 August 2016: Foot and Mouth Disease Control Programme (FMD-CP) contributed to reduce the clinical FMD outbreaks

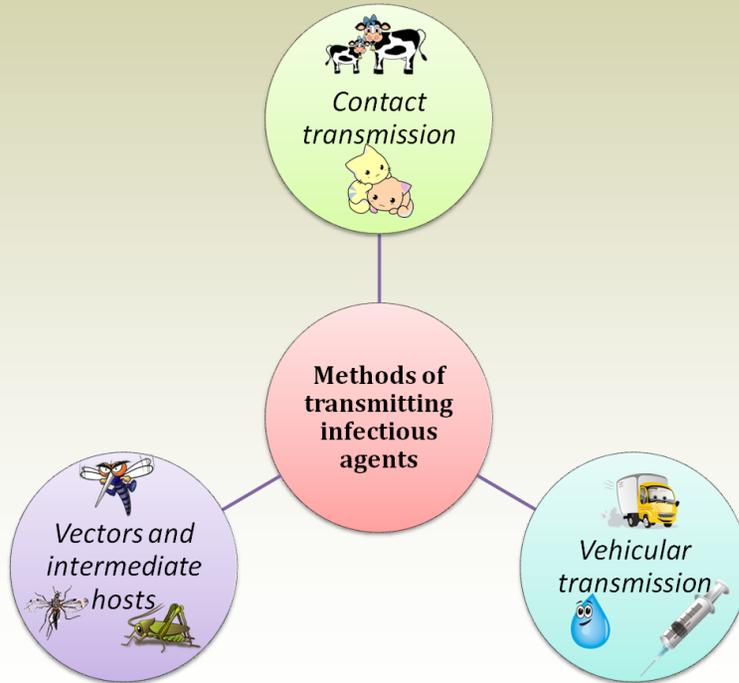
A location specific programme called FMD-CP is under implementation since 10th plan period and has been gradually expanded to 351 districts in 13 states and 6 UTs by now. This program has significantly contributed to reduce the clinical FMD outbreaks from 879 in 2012 to only 109 in 2015 across the country. Looking at the economic importance of the control disease, the Department has further decided to expand this program to remaining 16 States and one UT. The states have been requested to undertake FMD vaccination by availing the assistance from the National government. (ECTAD, Vol. 05, No. 32, 11 August 2016)

17 August 2016: Chicken deaths spark bird flu scare in Odisha

Death of about 1100 chickens at a poultry farm in Kharinasi village has triggered panic with the locals suspecting the death to be an outbreak of bird flu. However, veterinary experts who inspected the poultry farm have allayed fears of flu and said the chickens died of coccidiosis disease not bird flu. The chickens were subjected to laboratory test at the district veterinary college besides sending some of the samples to the Animal Disease Research Institute near Bhubaneswar. The rapid response teams comprising livestock inspectors, village 'gomitras' and veterinary officers in the district have been directed to detect sick chickens (ECTAD, Vol. 05, No. 33, 18 August 2016)

Epidemiology concept

Methods of transmitting infectious agents



Contact transmission: The agent is conveyed to the host through physical contact. Contact transmission can be direct contact or indirect contact. Horizontal and vertical transmissions can be referred to as contact transmission methods.

Vehicular transmission: Here, the agent is transferred between infected and susceptible hosts by means of an inanimate substance or object, such as water, foodstuffs, bedding materials, veterinary equipment and pharmaceuticals, or on the skin, hair or mouthparts of animals.

Vectors and intermediate hosts: vectors can transmit infectious agents in two ways. They can serve as a vehicle whereby the infectious agent is conveyed from one host to another without undergoing a stage of development or multiplication. This is known as mechanical transmission. Alternatively, the infectious agent can undergo some stage of development or multiplication in the vector - this is known as biological transmission.

Vectors may be able to pass the agent on to their own offspring transovarially, which is referred to as Transovarial transmission.

Arthropod vectors that undergo metamorphosis have the capacity to pass an agent from one developmental stage to the next. This is known as Transtadial transmission.

Answers for Crossword Jul16 in Vol. 3 Issue 21, July 2016

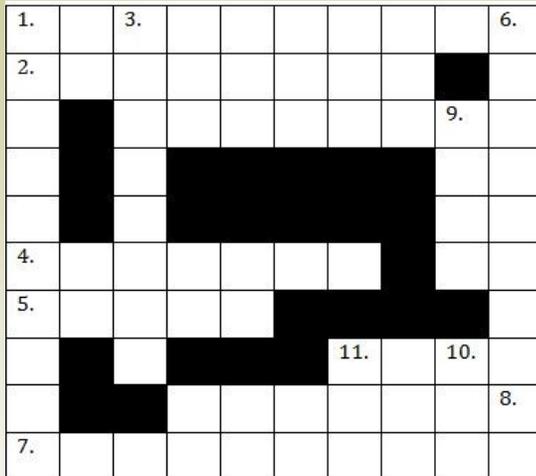
Across:

1. Ordinal; 2. T-test; 3. Rear; 4. Pen; 5. Lane

Down:

1. Outbreak; 6. Disease; 7. Interval; 8. ANOVA; 10. Event

Epidemiology Cross Word Puzzle- Aug16



Across:

1. The proportion of a population who have (or had) a specific characteristic in a given time period (10)
2. Coming into contact with a cause of, or possessing a characteristic that is a determinant of, a particular health problem (8)
4. In the context of multiple comparisons involving multiple statistical tests, the apparent significance level α of each test is called ____ significance level (7)
5. The traditional model of infectious disease causation which includes three components: an external agent, a susceptible host, and an environment is called epidemiologic ____ (5)

7. Efficiency: In statistics, the relative precision with which a particular study design or estimator will estimate a parameter of interest

8. Masking: Procedures intended to keep participants in a study from knowing some facts or observations that might bias or influence their actions or decisions regarding the study

11. Albo: Verticillium wilt, a disease affecting alfalfa plants, which is used as food for livestock is caused by the species ____-atrum

Down:

1. That divide a distribution into 100 parts of equal area (10)

3. The occurrence of more cases of a particular type of disease than expected in a given area (8)

6. Incision into the intestines (6)

9. A study that fails to find evidence for an association or effect (4)

10. An abbreviation for a subtype of adenocarcinoma of the lung (3)

Source of the data: The data for the **EpiNET.India** was obtained from the database of National Animal Disease Referral Expert System (NADRES), ICAR-NIVEDI. Any reproduction or representation of the data from this e-bulletin should be done only with prior permission from Director, ICAR-NIVEDI.

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