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Contents

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November 2016

The top ten diseases reported during November, 2016 are Peste des petits ruminants, Sheep and Goat pox, Anthrax, Haemorrhagic Septicaemia, Black Quarter, Fascioliasis, Enterotoxaemia, Theileriosis, Rabies and Contagious caprine pleuropneumonia. The following Pie chart shows the top ten diseases reported during the month of November, 2016 (Fig 1).

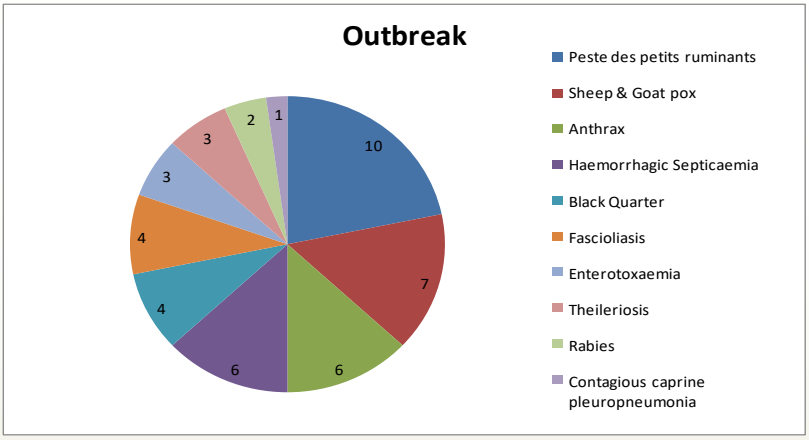

Fig. 1 Top ten diseases reported during November 2016
(Numbers in chart indicate outbreaks)

Peste des petits ruminants has been recorded from five states involving nine districts. Maximum number of outbreaks has been recorded in Karnataka state. Assam, Kerala, Madhya Pradesh and Rajasthan are the other states that reported the disease (Fig 3).

Sheep and Goat Pox disease has been recorded from four states involving seven districts. Highest number of outbreaks has been recorded from Karnataka state. Assam, Haryana and Rajasthan are the other states that reported the disease (Fig 3).

Anthrax disease has been recorded from two states involving five 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 Karnataka state involving three districts (Fig 2).

Black Quarter disease has been recorded from two states involving four districts. Assam and Karnataka states have reported equal number of outbreaks (Fig 2).

Fascioliasis disease has been recorded form Assam state and Puducherry Union Territory involving four districts. Puducherry Union Territory has reported maximum number of outbreaks. (Fig 4)

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

Theileriosis disease has been recorded from three states involving three districts. Assam, Karnataka and Punjab have reported equal number of outbreaks. (Fig 4)

Rabies disease has been recorded from Kerala state involving two districts. (Fig 3).

Contagious caprine pleuropneumonia has been recorded from Kerala state involving one district (Fig 2).

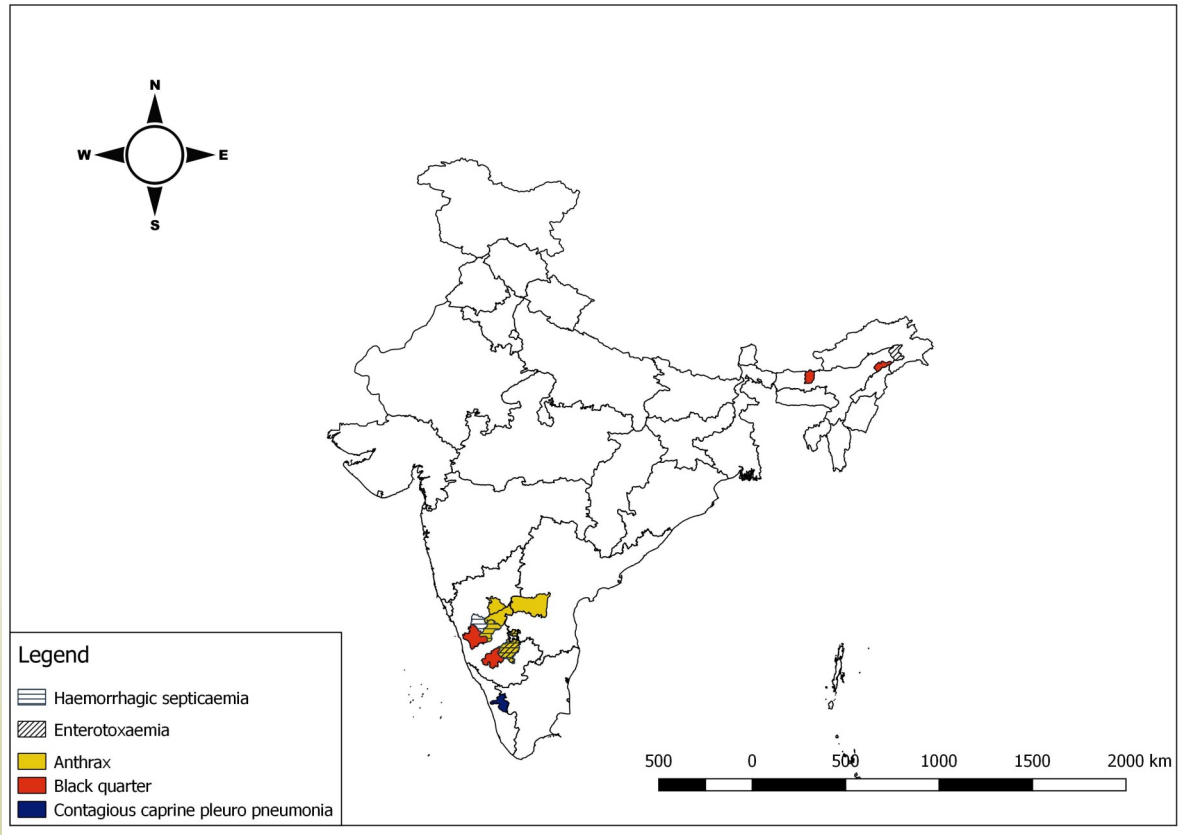

Fig. 2 Spatial distribution of bacterial diseases reported during November 2016

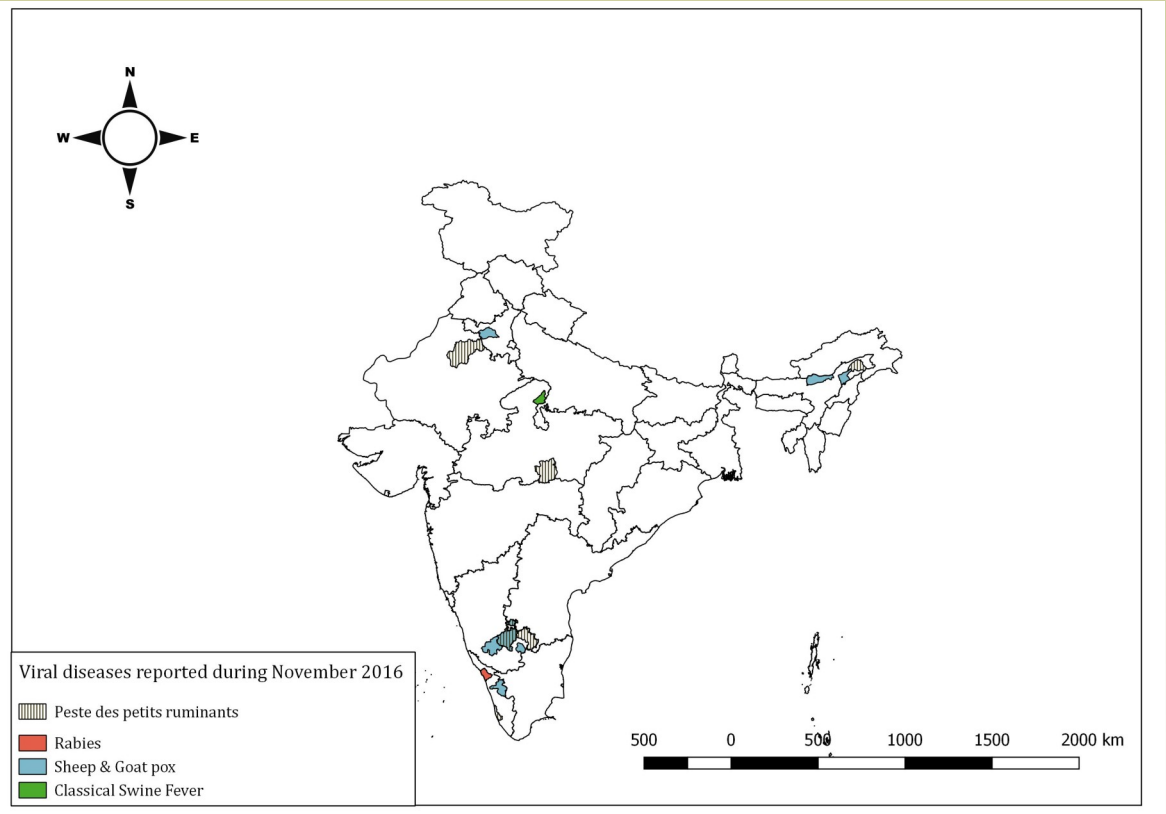

Fig. 3 Spatial distribution of viral diseases reported during November 2016

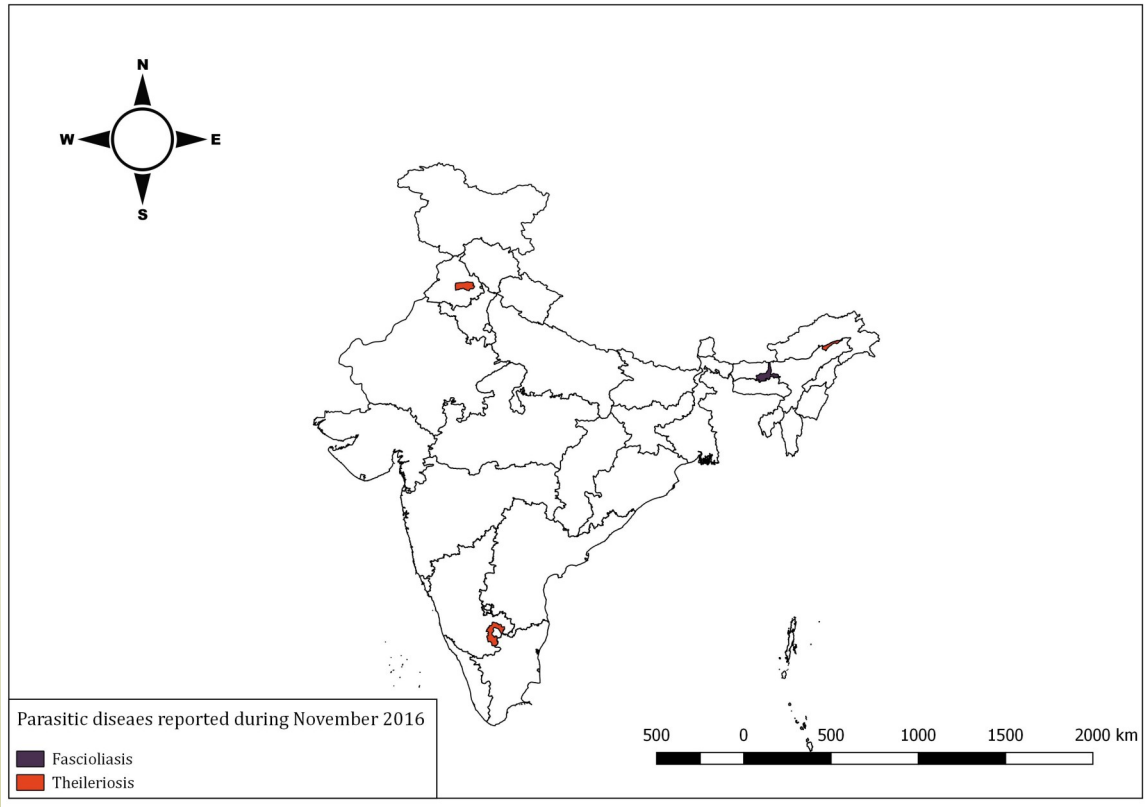

Fig. 4 Spatial distribution of parasitic diseases reported during November 2016

Table.1 State wise disease reports for November, 2016

State	Diseases Reported
Andhra Pradesh	Anthrax (Sheep)
Assam	Black quarter (Cattle); Enterotoxaemia (Goat); Fascioliasis (Cattle); Peste des petits ruminants (Goat); Sheep & Goat pox (Goat); Theileriosis (Cattle)
Haryana	Sheep & Goat pox (Sheep)
Karnataka	Anthrax (Sheep, Goat); Black Quarter (Cattle); Enterotoxaemia (Sheep); Haemorrhagic septicaemia (Sheep, Goat); Peste des petits ruminants (Goat, Sheep); Sheep and Goat pox (Sheep); Theileriosis (Sheep)
Kerala	Contagious caprine pleuropneumonia (Goat); Peste des petits ruminants (Goat); Rabies (Canine); Sheep & Goat pox (Goat)
Madhya Pradesh	Peste des petits ruminants (Sheep); Classical Swine Fever (Pig)
Puducherry	Fascioliasis (Sheep)
Punjab	Theileriosis (Cattle)
Rajasthan	Peste des petits ruminants (Sheep)

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

News

10 Nov 2016: High alert over monkey fever, Karnataka

High alert has been sounded in parts of Karnataka following directions issued by the Indian Council for Medical Research to take necessary precautions to prevent any outbreak of monkey fever (Kyasanur Forest disease). Several parts of the Western Ghats and districts in other Indian states, including Maharashtra, Kerala and Goa, have also been put on alert as this is the season when the fever spreads rapidly. In Maharashtra's Sindhudurga region bordering Karnataka, at least 125 have tested positive for monkey fever and seven have died between January and July, this year (http://www.deccanherald.com/content/579261/high-alert-over-monkey-fever.html)

12 Nov 2016: Highly pathogenic avian influenza, H5N8 confirmed and notified to OIE, Punjab and Haryana

As per notification to OIE by Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture and Farmers Welfare, New Delhi, India, highly pathogenic avian influenza, H5N8 has been confirmed among domestic ducks in Damenheri, Rajpura, Patiala, Punjab Blue Bird Tourist Complex, Hisar, Haryana. Of 43 birds, 10 birds were died from H5N8 and remaining 33 birds were destroyed in Punjab. Similarly Of 958 birds, 14 birds were died from H5N8 and remaining 944 birds were destroyed in Haryana. The outbreak started on 10 October in Punjab and 31 October 2016 in Haryana. The source of the infection is unknown (ECTAD, Vol. 05, No. 46, 17 November 2016)

14 Nov 2016: More updates on Avian Influenza H5N8

There is no further report of mortality from any part of Delhi, Madhya Pradesh, Punjab and Haryana where post operation surveillance is going on. The samples sent from Kanpur (Uttar Pradesh), Gwalior (MP), Madipur (Delhi) and Rohtak (Haryana) have been tested negative for Avian Influenza. The mortality was reported among poultry bird (chicken) in Itagi village, Hospet Taluk of Bellary district in Karnataka. The Reference Laboratory for HPAI in Bhopal has confirmed that the samples are positive for H5N8 Avian Influenza virus. The state Government of Karnataka has been given the directions to initiate the control and containment operations (ECTAD, Vol. 05, No. 46, 17 November 2016)

18 Nov 2016: Three peacocks found dead, Chandigarh

The recovery of three peacock carcasses near fields at Ramgarh Daun village has put Forest Department officials on alert here. The death of these peacock is to be the suspected due to avian influenza or bird flu. The officials, reached the spot and sent samples to the Regional Diagnostic Laboratory at Jalandhar for examination. While officials said only three carcasses had been recovered, however the residents of the area claimed that nearly 20 birds had died (ECTAD, Vol. 05, No. 47, 24 November 2016)

Asia International News

07 Nov 2016: Bangladesh launches mobile SMS service to fight animal diseases

The Bangladesh government has launched mobile SMS (short message service) services to educate small farmers about animal diseases and treatment. The department of livestock services (DLS) has used a seed grant from a government innovation fund to start the text messaging operation in the month of October. The objective is to bring the marginal farmers living in islands and remote areas under our services and protect them from losses. (ECTAD, Vol. 05, No. 45, 10 November 2016)

11 Nov 2016: Avian Flu, H5N8 in India alarms farmers in Nepal

The latest reports of bird flu cases in India has raised alarm among the poultry farmers of Chitwan. Only three years ago, the poultry business in Nepal had suffered greatly when bird flu had spread. To prevent yet another large scale loss, poultry farmers are said to be taking all necessary precautions. Animal Health Directorate, Government of Nepal has issued a public notice regarding the keeping and transportation of fowls (ECTAD, Vol. 05, No. 46, 17 November 2016)

15 Nov 2016: Over 2000 animals died, Chittagong, Bangladesh

Over 2000 animals, including cows, buffaloes, and rams, in remote island (char areas) died due to incessant rain and cold caused under the impact of cyclone Nada in the Bay. Cattle breeders said, 100,000 animals in the char areas could die if the government fails to dispatch medicine and veterinarians immediately to the affected areas. District livestock officer said that they were unable to provide emergency treatment to the sick animals for lack of field workers. More than 100,000 cows, buffaloes and rams are reared in chars on the Meghna river in Hatiya, Subarnachar, and Companyganj upazilas, Noakhali district, Chittagong (ECTAD, Vol. 05, No. 46, 17 November 2016)

Epidemiology concept

Description of disease events

A description of a disease problem specifies the disease and the population at risk, gives information on the distribution of events in time and space, and include an attempt to quantify disease events (Fig. 5).

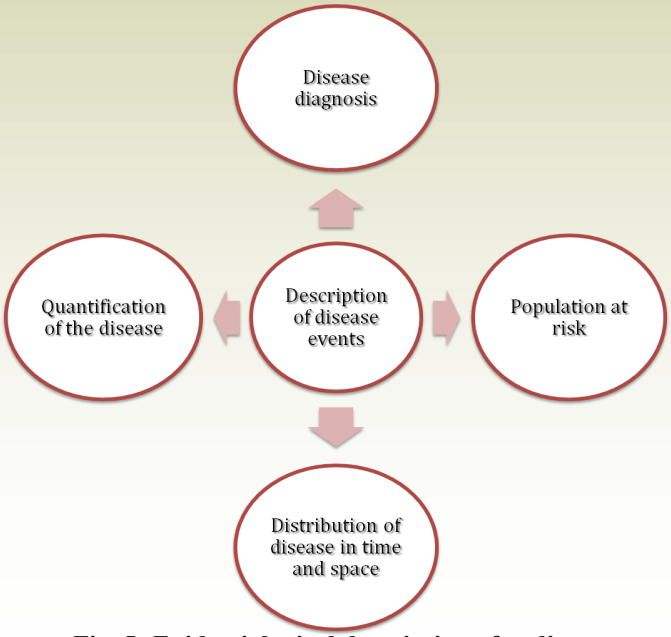

Fig. 5: Epidemiological description of a disease event

Disease Diagnosis: Diagnosing a disease is the first part of disease investigation and description. In case of infectious diseases, the disease agent also has to be identified, which is determined by available specific tests (ex: Polymerase Chain Reaction, microarray technology etc)

Populations at risk: Population at risk refers to specific group or subgroup that is more likely to be exposed, or is more sensitive to a certain substance than the general population. These can be identified by studying the distribution of the disease within host populations by species, breed, age and sex.

Distribution of disease events in time and space: The distribution of disease events in populations in time and space can be described by three basic descriptive terms:

⇒Endemic
⇒Epidemic
⇒Sporadic

Quantification of the disease events: Epidemiological research is based on the ability to quantify the occurrence of disease in populations. Data used to quantify disease events in populations are often dichotomous in nature i.e. an animal can either be infected with a disease agent or not infected. Different measures of a disease are used in quantification of the disease in question. Some of the measures of disease include

⇒ Prevalence
⇒ Incidence
⇒ Risk
⇒ Odds of a disease
⇒ Attack rate
⇒ Risk ratio

Answers for Crossword Oct16 in Vol. 3 Issue 24, October 2016

Across:

1. Regression; 3. Trend; 5. Virulence; 7. brittle

Down:

1. Rate ratio; 2. Exposure; 4. Notifiable; 6. Incubation; 8. z-test; 9. Garbage; 10. Strata; 11. Error

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