



SYLLABUS

THEORY

Definitions and aims of epidemiology. Factors influencing occurrence of livestock diseases and production. Ecological basis and natural history of diseases. Sources, Storage, retrieval and representation of disease information/data. Epidemiological hypothesis. Epidemiological methods: descriptive, analytical (observational), experimental, theoretical (modeling), serological and molecular. Survey of animal diseases. Surveillance and monitoring of livestock diseases. Animal disease forecasting. Strategies of disease management: prevention, control and eradication. Economics of animal diseases. National and International regulations on livestock diseases. Role of OIE and laws on international trade on animals and animal products.

Definition, history and socio-economic impact of zoonotic diseases. Classification of zoonoses and approaches to their management. New, emerging, re-emerging and occupational zoonoses. Role of domestic, wild, pet and laboratory animals and birds in transmission of zoonoses. Zoonotic pathogens as agents of bio-terrorism. Reservoirs, clinical manifestations in animals and humans, and the management of the following zoonoses: rabies, Japanese encephalitis, Kyasanur forest disease, influenza, anthrax, brucellosis, tuberculosis, leptospirosis, listeriosis, plague, rickettsiosis, chlamydiosis and dermatatophytosis. Food borne zoonoses: salmonellosis, staphylococcosis, clostridial food poisoning, campylobacteriosis, helminthosis, toxoplasmosis and sarcocystosis. Veterinary Public Health Administration.

PRACTICAL

Collection of epidemiological samples. Measurement of disease: determination of morbidity and mortality rates/ratios. Generation of epidemiological protocols and reports. Demonstration of selected software programmes/models e.g. EPIZOO, HandiSTATUS and India-Admas-EPITRAK. Evaluation of vaccines and diagnostic tests. Determination of Associations and risks: relative risk, Odd's ratio and attributable risk. Survey of an animal disease on a farm.

Field survey of zoonotic diseases. Concurrent isolation and identification of important pathogens of zoonotic importance from animal and human sources including foods of animal origin and their interpretation. Study of rural environment and health status of rural community. Visit to primary health centre/human hospital and study of the common diseases affecting rural/urban population, and probable relationships of these human disease conditions with animal diseases present in the area.