

BOVINE LEUKOSIS

SPECIES AFFECTED:

Cattle

DESCRIPTION:

Bovine leukemia virus can be identified in many cattle herds throughout the United States. Several surveys conducted in the past 15 years found that 10 to 42 percent of dairy animals and 1 to 6 percent of beef animals were infected with BLV. The percentage of infected cattle within herds ranged from 0 to more than 50 percent for dairy and from 0 to 20 percent for beef. The percentage of herds infected with BLV varies from state to state.

Bovine leukemia virus targets lymphatic tissues. Lymphocytes make up one of the classes of white blood cells. The virus is incorporated into the makeup of infected lymphocytes; therefore, when these cells divide, the presence of the virus is maintained.

Less than 1 percent of BLV-infected cattle will develop lymphosarcoma. Approximately one third of cattle with BLV infection develop persistent lymphocytosis, or an increase in the number of lymphocytes in circulation lasting from months to years. Animals with lymphocytosis and most animals that become infected with BLV do not develop clinical illness. In these animals, milk production and fertility are not adversely affected.

Whether or not EBL results from BLV infection, this virus is maintained in lymphocytes for the life of an infected animal. Antibodies against the virus are produced in response to the presence of the virus. When antibodies are identified in serum samples from cattle exposed to a disease agent, they are classified as seropositive. In the case of BLV, the virus is never eliminated; therefore, seropositive cattle are a potential source of infection to susceptible animals within the herd.