

Abstract:

Infectious bursal disease virus (IBDV) isolates were recovered from outbreaks to initiate activities towards developing a local vaccine strain. Use of indigenous chicken embryos was exploited to determine their potential, promote utilization of local resources for research, and enhance household economic activities. Bursa of Fabricius (BFs) samples from outbreaks shown to be IBDV positive were homogenized and inoculated into 4-week-old specific pathogen-free (SPF) IBDV seronegative white leghorn chicks. The harvested virus was inoculated into 11-day-old indigenous chicken embryos that were IBDV seronegative and passaged serially three times after which they were inoculated into 4-week-old indigenous chicks to test for presence and virulence of propagated virus. Out of 153 BFs collected from outbreaks, 43.8% (67/153) were positive for IBDV antigen and 65.7% (44/67) caused disease in SPF chicks. The embryo mean mortalities were 88% on primary inoculation, 94% in 1st passage, 91% in 2nd passage, and 67% in 3rd passage. After the third passage in embryos all the 44 isolates were virulent in 4-week-old indigenous chicks. The results show that indigenous chicken embryos support growth of IBDV and can be used to propagate the virus as an alternative viral propagating tool for respective vaccine preparation.