Material & Methods

Data and information were collected, managed and analyzed from different resources by using Microsoft Office, Excel windows 7 and @Risk version 7. Financial model was derived by @Risk spread sheet to calculate RVF cost in monetary value for controlling of RVF outbreak. Eventually, Cost estimates for RVF would pertain different parameters like time, RVF mortality, RVF morbidity, Animal weight, Milk production, Fodder, Leather, Land, Labor, Assets, Salaries and Others to realize the losses due RVF. The current financial model has been modified to estimate cost by using the optimal cost from the basic values of input elements. Parameters were tested qualitatively, and then cost distribution was simulated. RVF control measures were assessed on Excel spreadsheet from 2007 to 2010.

Table 1: cost estimate model for RVF

Results (continue)

Socio-economics of RVF is significant to evaluate burden and strategies to combat it. RVF has negative impact on livestock industry. Nonetheless, OIE recommendation and regulations allow export in certain conditions from endemic countries that are demonstrating and approved RVF free zones or compartments. OIE and One health initiative are emphasized on safe and effective RVF vaccine. In addition, World Trade Organization (WTO) has Sanitary and Phytosanitary (SPS) agreement which protects both domestic and export countries to have safe and healthy products. Sudan is being an active member in trade and market dynamics in livestock and livestock product industry in Greater Horn of Africa. From 2007 to 2010, Sudan has been implementing RVF control strategies which brought down the disease to manageable level. Beside, Sudan is still trading with Saudi Arabia and Gulf countries in livestock and livestock products based on OIE and WTO recommendations and the regulations. Although, RVF cost was estimated by US $ 7460709.29, control and emergency preparedness has reduced risk of RVF. The current paper has derived financial model by analyzing essential statistics with its basic parameters; this provides ranges for distribution of cost in final output. This model has estimated RVF cost derived from population with 95% confidence interval (C.I.)31.1.2016, This had mostly affected the livelihood of rural communities by losing their source of income through death of livestock due to RVF outbreak in 2007 (Hassan et al, 2011). Official vaccination is the way forward to controlling RVF, however it was being used by (0.73%) from 2007 to 2010, in some scenarios vaccination is prohibited owing to neutralizing of existing antibodies generated by exposure or infection by Rift Valley fever virus (RVFV). Surveillance in study period has demonstrated different control measures at various levels of epidemic depending on epidemiology and spread out of RVF outbreaks. RVF socioeconomics is necessary to be undertaken for control and management of the disease. Risk analysis is essential to estimate cost and risk abated RVF.