Epidemiological investigations of bovine enzootic haematuria in Bhutan
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A chronic, debilitating disease of grazed cattle known as bovine enzootic haematuria (BEH), characterised by either continuous or intermittent passage of red urine was formally recognised in Bhutan in the early 1990s however it is likely that the condition has been present in the country well before that time. Given that bracken fern (Pteridium reuolutum) grows in abundance in most areas of the country and the consistency of the clinical signs and post mortem findings from cases with literature reports of bracken fern toxicity, it can be assumed that bracken fern toxicity is the primary cause of BEH in the Bhutanese cattle population. In September 2011 the authors of this paper took part in an intensive one-month project to develop a strategy to minimise the impact of BEH on the health and productivity of Bhutanese cattle. Two field studies designed to better understand the epidemiological features of BEH in the Bhutanese context were the key recommendations from the strategy development project. The first was a cross-sectional survey to determine the demographic features of the cattle population, with an outcome being an estimate of the total years of productive life lost attributable to BEH. The second was a case-control study to identify risk factors for BEH operating at: (1) the individual cow; (2) the household; and (3) environmental level. In February 2012 field work commenced to collect data for the cross-sectional and case-control studies. This talk will discuss aspects of the design and implementation of the two studies in particular issues related to case definition, selection of controls for the case-control study and sample size considerations that needed to be taken into account when the prevalence of exposure was expected to be relatively high.