



7.1.2.2 **¶** Ndunguru, Joseph. (1997). Identification of viruses infecting pepper (*Capsicum annuum* L.) in Lusaka Province, Zambia. (Supervisor: Prof. R. G. Kapooria).

Commercial and backyard sweet pepper fields in Lusaka Province were surveyed for the occurrence of viral diseases during the 1996 growing season. Five different viruses were found infecting the pepper crop and have been identified in samples collected from fields. Field disease syndrome, host range studies, serological tests and electron microscopy indicated that alfalfa mosaic virus (AMV), potato virus Y (PVY), tobacco mosaic virus (TMV), cucumber mosaic virus (CMV) and pepper mild mottle virus (PMMV) infected pepper cultivars in Zambia. Serological tests using antisera against AMV, CMV, PVY and PMMV following direct-double antibody sandwich enzyme-linked immunosorbent assay (ELISA) confirmed the presence of viruses in pepper samples. Electron microscopic examination of negatively stained sample extract also revealed the existence of virus particles characteristic of AMV, CMV, PMMV, PVY and TMV. AMV was the most prevalent virus and was noticed in 70% of the surveyed fields followed by PVY and TMV which were found in 50% and 40% of the surveyed fields, respectively. CMV and PMMV were relatively less predominant and were seen in 30% and 20% of the surveyed fields, respectively. The disease incidence ranged between 20 – 100%. The pepper plants showed severe infection in fields with only one cultivar. However, in fields where pepper cultivars were more than one, the infection was relatively mild. Since the presence of viruses has been confirmed on pepper grown in Zambia, the management of virus diseases is an important task of the growers in the country. It is therefore imperative that all available technologies such as elimination of virus source, reduction of vectors and use of resistant or tolerant cultivars should be deployed to minimize losses occurring from viral diseases in Zambia.