**List of Tables**

Table 1 Three letter and single letter codes and triple codons for amino acids  
Table 2.1 Banana clones in India  
Table 2.2 Banana clones cultivated in India  
Table 2.3 Area harvested and production of banana in the top five countries in the world  
Table 2.4 Cultivation and production of Musa spp., during 2003-2008 in India.  
Table 2.5 Certain bacterial diseases, causal organisms and their distribution  
Table 2.6 Certain fungal diseases, their causal organisms and their distribution  
Table 2.7 Virus diseases, their distribution and certain properties of causal viruses naturally infect Musa spp.  
Table 2.8 Certain general characteristics of Potyviridae family  
Table 2.9 Known functions of the potyviral proteins and non-coding sequences  
Table 2.10 Certain characteristics of bacterial expression vectors  
Table 2.11 Expression of certain potyviral CP genes in bacterial system  
Table 2.12 Virus protein and genome based tests used for detection of plant viruses and their sensitivities  
Table 2.13 BBMV genome characteristics  
Table 2.14 Certain properties of Cucumber mosaic virus  
Table 3.1 Source of virus cultures collected from Musa spp., cultivated at different locations in Andhra Pradesh.  
Table 3.2 Primers used for the amplification of different genomic regions of BBMV, BSV and CMV infecting Musa spp., and other hosts.  
Table 3.3 PCR cyclic conditions used for amplification of genomic sequences of three viruses  
Table 3.4 Primers for amplification of BBMV, BSV and CMV  
Table 4.1 Allocation of names to BBMV RT-PCR positive and sequence confirmed virus samples based on place of collection.
Table 4.2 Geographical origin and GenBank accession numbers of the BBrMV isolates

Table 4.3 Showing CP nucleotide sequence identity of BBrMV AP isolates with other reported BBrMV isolates.

Table 4.4 Showing CP amino acid sequence identity of BBrMV AP isolates with other reported BBrMV isolates.

Table 4.5 PCR screening of Musa spp., samples collected from different districts of Andhra Pradesh.

Table 4.6 Names allocation to BSV PCR positive virus samples based on place and Musa genotype.

Table 4.7 RT/RNaseH gene sequence of BSV isolates from GenBank used for sequence comparison and phylogenetic analysis.

Table 4.8 Showing nucleotide sequence identity of BSV AP isolates with other reported BSV isolates.

Table 4.9 Showing amino acid sequence identity of BSV AP isolates with other reported BSV isolates.

Table 4.9.1 CMV CP gene sequences from GenBank used for phylogenetic analyses.

Table 4.10 MP gene sequences of CMV isolates from GenBank used for sequence comparison and phylogenetic analysis.

Table 4.11 Nucleotide sequence identity of the CPs of CMV isolates of Musa spp., and some other hosts from Andhra Pradesh with other reported CPs of CMV isolates.

Table 4.12 Amino acid sequence identity of the CPs of CMV isolates of Musa spp., and some other hosts from Andhra Pradesh with other reported CPs of CMV isolates.

Table 4.13 Nucleotide sequence identity of the MP gene of CMV isolates of Musa spp., and some other hosts from Andhra Pradesh with other reported MPs of CMV isolates.
Table 4.14 Amino acid sequence identity of the MP of CMV isolates of *Musa* spp., and some other hosts from Andhra Pradesh with other reported MPs of CMV isolates

Table 5.1 Titers of rCP antiserum determined by DAC-ELISA

Table 6.1 Tests applied for detection of certain viruses infecting *Musa* spp

Table 6.2 Detection of BBMV in *Musa* spp leaf extracts by DAC-ELISA using polyclonal antibodies produced to rCP

Table 6.3 Comparison of the sensitivity of DAC-ELISA, RT-PCR and IC-RT-PCR tests for detection of BBMV in *Musa* spp.