

P.37 - Identification of virulent isolates of *Helicoverpa armigera* nuclear polyhedral virus (HaNPV)

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The molecular characterization indicated that there exist variations in the DNA profiling of different HaNPV isolates. The dendrogram constructed using symmetric matrix of different isolates resulted into two major clusters. The first major cluster comprised of Dharwad, Kalpavruksha, Coimbatore, BPM, PDBC and BPL isolates. Within the first major cluster, there are two sub-clusters in which the first subcluster has two sub-sub clusters. Dharwad and Kalpavruksha isolates formed one sub sub-cluster with a genetic similarity co-efficient of around 0.65 whereas, Coimbatore and BPM formed the second sub sub-cluster with a genetic similarity value of 0.63. PDBC and BPL formed the second sub-cluster in the first major cluster with a genetic similarity of 0.61. The similarity matrix pertaining to different isolates revealed that the similarity co-efficient ranged from 0.38 to 0.82. The highest genetic similarity index of 0.82 was seen between the isolates from Raichur and Guntur followed by 0.77 between the isolates from Coimbatore and Raichur. The minimum genetic similarity of 0.38 was found between the isolates from PCI and Dharwad. The isolates collected from Coimbatore and Gulbarga were found to be more virulent compared to other isolates. The pooled LT50 values for Coimbatore and Gulbarga isolates were 101.62 and 102.62 h, respectively whereas, the pooled LC50 values were 1.98×10^4 and 2.04×10^4 POBs/ml, respectively. Field evaluation of different HaNPV isolates against *Helicoverpa armigera* (Hubner) in chickpea ecosystem at the Main Agricultural Research Station, University of Agricultural Sciences, Dharwad revealed that the performance of Gulbarga and Coimbatore isolates was better in terms of their ability in recording higher larval mortality of *H. armigera* with higher yield of chickpea. The Incremental Benefit Cost Ratio (IBCR) was also highest in Gulbarga (2.88) and Coimbatore (2.83) isolates followed by Dharwad isolate (2.39).