Title :

Assembly of the complete mitochondrial genome of Pepper Cultivars *(Capsicum annuum L.)*

Abstract :

The pepper (Capsicum annuum) is recognized for its culinary, medicinal, and economic attributes. Its mitochondrial genome holds potential insights into evolutionary history, genetic diversity, and functional dynamics. However, the assembly of this genome is challenging due to factors such as repeat regions, the presence of nuclear mitochondrial DNA (NUMT), and the inherently large size of plant mitogenomes. In this study, we employed MITObim, a pipeline designed for the assembly of novel mitochondrial genomes from WGS data, to characterize the mitochondrial genome sequences of six C. annuum samples. These results enhance the current understanding of the genetic makeup of peppers and establish a basis for future pepper-related research.