Bacillus thuringiensis (Bt) has been extensively used for four decades in biopesticidal formulations due to its safe environmental and human health records. In addition, probable inclusion of alternative Bt formulations from fermented wastewater (WW) and wastewater sludge (WWS) in the future also has been included with inputs on their advantages with some salient results. There are various environmental factors like ultraviolet radiation, rain, pH, temperature and foliage physiology which impede efficacy of Bt formulations. Conventional formulations have been substituted by advanced versions like microencapsulations and microgranules to enhance residual entomotoxicity. The widespread use of Bt is often challenged by production as well as formulation costs.