

## **Stronger together : Synergy between an emerging monopartite begomovirus and a DNA-B component**

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In recent decades, a legion of monopartite begomoviruses transmitted by the whitefly *Bemisia tabaci* has emerged as serious threats to vegetable crops in Africa. Recent studies in Burkina Faso (West Africa) reported the predominance of pepper yellow vein Mali virus (PepYVMLV) and its frequent association with a previously unknown DNA-B component. To understand the role of this DNA-B component in the emergence of PepYVMLV, we assessed biological traits related to virulence, virus accumulation, location in the tissue and transmission. We demonstrate that the DNA-B component is not required for systemic movement and symptom development of PepYVMLV (non-strict association), but that its association produces more severe symptoms including growth arrest and plant death. The increased virulence is associated with a higher viral DNA accumulation in plant tissues, an increase in the number of contaminated nuclei of the phloem parenchyma and in the transmission rate by *B. tabaci*. Our results suggest that the association of a DNA-B component with the otherwise monopartite PepYVMLV is a key factor of its emergence.