

RUSH, C. M., and G. B. HEIDEL\*, Texas Agricultural Experiment Station, P.O. Drawer 10, Bushland, TX 79012. - Variation in symptomatology and serotype among furoviruses infecting sugar beet.

Beet soilborne mosaic virus (BSBMV) is a multiparticulate rod-shaped virus transmitted by *Polymyxa betae*. It is similar to beet necrotic yellow vein virus (BNYVV), but the viruses are serologically different. BSBMV capsid molecular weight has been estimated at 22.5 kDa, and the genome is comprised of three to four RNA species. Sugar beets exhibiting typical BSBMV-like foliar symptoms were collected from fields in Colorado. Leaf samples were tested by ELISA. Two isolates (Neal, Amen) were positive for BSBMV. Three isolates (RC, LC, Schaeffer) repeatedly tested negative for BSBMV or had absorbance values that were higher than those of healthy controls but lower than those typically recorded for positive samples. A single 22-23 kDa protein species from each isolate was visualized in denaturing polyacrylamide gels. Using BSBMV-specific PCR primers, a single 700 bp product was amplified from RNA extracted from each isolate. Gel electrophoresis of RNA extracted from LC and RC virus preparations indicated the presence of four RNA species with a banding pattern similar to that of BSBMV. Virus isolates serologically different from BSBMV but similar in terms of symptom expression, capsid protein, RNA banding pattern and PCR products amplified using BSBMV-specific primers may comprise a serotype of BSBMV. Along with serological variation among BSBMV isolates, variation in foliar and root symptomatology has been observed.