

DUFFUS, J.E.¹, G.C. WISLER¹, H.Y. LIU¹, E.G. RUPPEL², and E.D. KERR³, ¹USDA, Agricultural Research Service, 1636 E. Alisal St., Salinas, CA 93905, ²USDA, Agricultural Research Service, 1701 Center Ave., Fort Collins, CO 80526, and ³University of Nebraska, Panhandle Research & Extension Center, 4502 Ave. I, Scottsbluff, NE 69361. A new aphid-transmitted yellowing virus disease of sugarbeet in Colorado and Nebraska.

A disease of sugarbeet exhibiting severe foliage yellowing and necrosis has been occurring with increasing frequency in Colorado and Nebraska during recent years. Symptoms resemble those induced by beet western yellows virus (BWYV), including yellowing of the older and middle leaves, thickening, brittleness and the development of *Alternaria* on the yellowed tissue. The virus inducing this disease has been shown to be transmitted by the green peach aphid. Preliminary host range, serological and molecular studies indicate that the new virus is not BWYV. The host range is distinct from common isolates of BWYV found in the USA and from typical isolates of beet mild yellowing virus (BMYV) which is found in Europe. This new virus can be distinguished from BWYV and BMYV by its ability to infect *Chenopodium capitatum* but not *Capsella bursa-pastoris*. Serological and molecular studies have indicated differential reactions from BWYV and BMYV, but have not yet produced a specific probe to distinguish the virus. The disease appears similar to yellowing isolates found in California and Texas, and thus may have wide distribution. Little information is presently available regarding the ecological and epidemiological factors that allow this virus to increase over such a wide area.