SCHOLTEN, OLGA E., RENÉ M. KLEIN-LANKHORST, DANNY G. ESSELINK, THEO S.M. DE BOCK, and WOUTER LANGE. DLO-Centre for Plant Breeding and Reproduction Research (CPRO-DLO), P.O.Box 16, 6700 AA Wageningen, The Netherlands. <u>Identification and mapping of random amplified polymorphic DNA (RAPD) markers linked to resistance against beet necrotic yellow vein virus (BNYVV) in Beta accessions.</u>

Rhizomania is a major disease problem in many sugar beet growing countries in the world. The disease is caused by the beet necrotic yellow vein virus, which is transmitted by the soil borne fungus *Polymyxa betae*. Breeding for resistance to BNYVV is the only possibility to counteract the disease. Molecular markers linked to resistance against the virus are useful to facilitate the introgression of one or more of such genes in breeding materials. Following the approach of bulked segregant analysis, RAPD markers were identified in four *Beta* accessions Holly, R104, R128 and WB42. Two primers were found which generate RAPD markers tightly linked to resistance in segregating families of Holly, R104 and R128, indicating that the genes for resistance in these accessions might be situated at the same locus. However, other specific primers were identified which generate RAPD markers linked to resistance in only one of these accessions. Short-range maps were established around the resistance locus in these accessions. For WB42, RAPD markers were identified, which were located at a relatively large distance from the gene for resistance.