

Genetic Analysis of Prominent Lateral Root Formation in Carrot

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Improvement of the architecture and nutritional value of root crop is an important target for breeders. Prominent lateral root development in carrot is a very important trait, but has received little attention in genetic studies. Consequently, the genetics and inheritance of prominent lateral root in carrot are not well understood. The objectives of this research are: to determine patterns of inheritance of storage root architecture and to utilize molecular markers to map this trait. For this purpose advanced generations, developed from a cross between wild and an inbred line are being evaluated using a lateral rooting evaluation scale of 0 to 4 (0 smooth and 4 profuse lateral roots). These families are being grown over three different locations and SSR and SNP markers are being evaluated.