(for “Molecular Markers and Mapping Strategies”)

Molecular breeding for root rot resistant raspberries suitable for low input growing systems

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The UK raspberry industry is faced with new challenges in a rapidly-evolving market; with the shift of production to low input systems, under cover, and with the use of fewer pesticides. However, there is a lack of cultivars resistant to some of the most damaging pathogens, notably to raspberry root rot caused by *Phytophthora fragariae* var. *rubi*, which is one of the most devastating diseases of raspberry.
Disease resistance is increasing in importance, but breeders have limited resources and is traditionally time consuming. Breeding can be more precise and rapid with the use of a genetic linkage map and the development and utilisation of diagnostic markers associated with genes that control complex QTLs. A genetic linkage map has been constructed from two phenotypically different cultivars; a susceptible European cv. Glen Moy and a resistant North American cv. Latham. Marker assisted selection and breeding would make possible the introduction of resistance into selected germplasm and breeding lines
Methods used include; glasshouse and field screening of Moy x Latham mapping population for root rot resistance and SSR development and utilisation as markers.

Keywords:
Phytophthora fragariae var. *rubi*, root rot, Glen Moy, Latham, raspberry, marker assisted selection