

Approaches to mapping in horticultural crops

M. Omid and A.A. Shahnejat-Bushehri

Dept. of Plant Breeding, College of Agriculture, Tehran University, Karaj.

In earlier days, the main purpose of linkage mapping was viewed more as a bookkeeping device by which the various genes could be ordered and predictions regarding recombination frequencies could be made. The development of molecular markers has greatly changed the relationship between the breeder and the linkage map and most breeders have convinced that a laboratory evaluation is an essential part of a modern breeding program.

Nowadays the breeder has ability to tag virtually any region(s) of the genome, and as DNA can be extracted from seed tissue, the selection for desired genotypes can be made even before generation.

Woody perennials have been largely ignored by geneticist for justifiable reasons. Probably the most important of those are the large size and long generation time of these crops, making them a very inconvenient organism for a young geneticist with limited facilities and a need for quick results.

The purpose of this paper is to describe several approaches for mapping in different types of crops. Therefore, molecular markers and their applications are described respectively.