Variances of Genetic Distance Measurements Among Alfalfa Accessions Compared From Several Molecular Marker Types. (C08-kisha175620-Poster)

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Abstract:

Molecular markers have become an accepted and widely used tool for the measurement of genetic diversity, but the accuracy and precision of the information provided by the many types of molecular markers available are often unknown. The marker used may be selected on the basis of cost efficiency, and may be dependent upon the laboratory or the species being analyzed. To examine the efficiency of various marker types in synthetic populations, ninety-six plants from each of three alfalfa accessions were analyzed using Simple Sequence Repeat (SSR), Amplified Fragment Length Polymorhophism (AFLP), and Random Amplified Polymorphic DNA (RAPD) markers, as well as amplified regions of hypervariable chloroplast DNA. The accessions were collected from Australia, Turkey, and Spain. All marker types used resulted in similar relative relationships among the three populations. This study discusses the variances of genetic distance measurements associated with each marker type.

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