

ABSTRACT

AZIZA Mohamed Hassanein, Molecular fingerprint and genetic purity of some wheat genotypes (*Triticum aestivum* L.), Unpublished Ph. D. Dissertation, Genetics Dept., 2006.

Ten wheat cultivars with their classes, breeder, basic and certified were identified using yield-related traits such as plant height, flowering, maturity, grain yield / plant, total biomass and harvest index. The studied cultivars exhibited wide variations, between cultivars and between classes in most of the traits. Two molecular markers were used to fingerprint these cultivars, RAPD and SSR. The combined class pattern systems were used to obtain better resolution for the development of unique fingerprints for each of these cultivars. It was possible to obtain some molecular markers, which were linked to some yield-related traits. Four wheat cultivars were chosen and examined for their purity using SSR markers. Some primers revealed variations between the three classes of these cultivars.

Key words: wheat, yield-related traits, RAPD, SSR, fingerprints, molecular markers, genetic purity.

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List of Abbreviation

Random Amplified Polymorphic DNA (RAPD)

Simple Sequence Repeats (SSRs)

Distinctness Uniformity and Stability (DUS)