Micro satellite markers (SSRs) associated with yield related traits in wheat (*Triticum aestivum* L.) landraces

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Wheat is an important staple food produced, consumed and traded cross the globe. Improvement of wheat yield and wheat production increase (~70%) is important for meeting the demands of increasing population. To achieve this goal, this can be done through direct selection for yield (high yield) or indirect selection of yield components (improvement of traits) i.e. plant height, number of spikes per plant, spike length, number of grains per spike, grain weight and thousand kernel weight. . Thousand-kernel weight is an important yield trait and wheat grading parameter, which is used to estimate the agronomic yield of a wheat genotype. Wheat kernel size (length and width) is also an important trait in both yield and quality because larger and consistent sized kernels are of interest as they command a higher market price. Moreover, kernel size is a simple and cheap predictor of milling quality i.e. flour yield, endosperm separation and fragility and higher flour yield. However, grain yield is one of the complex trait controlled by the multiple genes and the environment. Therefore, understanding the genetic bases of the kernel characters is an essential step in the development of improved wheat varieties. This abstract will report associations between micro satellite markers (SSRs) and 1000-kernel weight and grain size in genotypes collected from Afghanistan, Iran, Pakistan, United States, South Africa, Turkey, Georgia, Egypt and Tajikistan. The associations and diversity found in this study will be useful for marker-assisted selection (MAS) for further wheat yield potential improvement.