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Description:

Wheat (*Triticum aestivum* L.) productivity and quality is adversely affected by different diseases such as yellow rust, fusarium head blight, powdery mildew, and loose smut. Development of high yielding and durable diseases resistant wheat lines with better nutritional values is the prime objective of the Cereal Crops Research Institute (CCRI), Pirsabak, Nowshera, Khyber Pakhtunkhwa, Pakistan. Stable wheat lines have been developed through hybridization of diverse elite germplasm and donor parents with disease resistance and desirable nutritional quality. Similarly, line by tester mating design was used to study the genetic potential, heterosis, and combining ability in wheat. In the current study, eight diverse parental lines such as Gulzar-19, Shahkar-13, Wadan-17, Fatehjang-16, Fahim-19, Pirsabak-19, Khaista-17, and Pirsabak-15 with highest yield and adaptability were crossed with four testers viz., Zincol-16, Akbar-19, PR-128, and Zinc Shakthi during 2021–2022. Divergent gene pool had been used to develop superior lines through heterosis, combining ability, and gene action in wheat. Information regarding the current studies can be found in the research manuscript of Sultan *et al.* (2026). Sultan M, Khan SA, Afridi K, Ali N (2026). Genetic factors of heterosis for yield-associated traits in bread wheat (*Triticum aestivum* L.). *SABRAO J. Breed. Genet.* 58(4): 1551-1560. <http://doi.org/10.54910/sabrao2026.58.4.7>.

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