



RESEARCH ARTICLE :

Suitability of alternate cytoplasm based hybrids for summer adaptation in pearl millet [*Pennisetum glaucum* (L.). R. Br.]

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SUMMARY : Pearl millet occupies a prominent place after rice and wheat in India. It is predominantly grown in rainy season with significant increase in area under summer grown pearl millet. The hybrids grown during summer have poor seed set though a few hybrids with good seed production potential are reported. A study was taken upto compare the A₁ CMS system (97111A₁ and 98222A₁) with A₄ CMS (99222A₄) and between high yielding (97111) and drought tolerant (98222, 99222) backgrounds. Of the 66 hybrids evaluated, the hybrid 97111A × R42 was the best performing with a grain yield of 6.27 t/ha. The hybrids based on 97111A performed better for plant height and panicle emergence while those based on 98222A were early to flower, had more number of tillers, had greater panicle width and panicle weight. The hybrids based on A₄ CMS based female parent 98222A had more panicle length, grain yield and panicle harvest index. It has been observed from the current study that the A₄ cytoplasm based hybrids in drought tolerant genetic background perform well as compared to A₁ CMS based hybrids. For summer adaptation, the grain yield was positively associated with plant height, panicle length, panicle weight and panicle harvest index.

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