



**RESEARCH ARTICLE :**

## Identification of drought tolerant and high yielding genotypes in ragi under rainfed conditions

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**SUMMARY :** A Field experiment was conducted at Agricultural Research Station (millets), Perumallapalli, Tirupati during *Kharif*, 2015 to identify the suitable traits which are more resistant to drought and also high yielding in finger millet. The treatment consists of 10 genotypes viz, G<sub>1</sub>:PPR-1012, G<sub>2</sub>:PPR-2885, G<sub>3</sub>:PPR-2773, G<sub>4</sub>:BR-36, G<sub>5</sub>:PPR-1044, G<sub>6</sub>:PPR-1040, G<sub>7</sub>:PR-10-30, G<sub>8</sub>:Sri chaitanya, G<sub>9</sub>:Vakula and G<sub>10</sub>:Hima. The experiment laid out in factorial randomized block design replicated thrice. Imposition of moisture stress from panicle initiation to grain filling stage significantly reduced all the yield parameters. Among all the other experimented genotypes G<sub>4</sub>: BR-36 performed well under moisture stress conditions and recorded highest values in terms of drought tolerant traits (SCMR (SPAD Chlorophyll Meter Reading), Chlorophyll Stability Index (CSI), Relative Water Content (RWC), Root length and Proline content) and yield attributes (No. of tillers per plant, no. of fingers per ear head, 1000 grain weight, grain yield, straw yield and harvest index) also. G<sub>4</sub>:BR-36 performed well compared to G<sub>3</sub>:PPR-2773 followed by G<sub>1</sub>:PPR-1012 in terms of most of the drought tolerant traits. Hence, G<sub>4</sub>: BR-36 and G<sub>1</sub>:PPR-1012 followed by G<sub>3</sub>:PPR-2773 genotypes performed well and recorded higher yields under rainfed conditions and better suitable for drought conditions.

**KEY WORDS :**

Finger millet,  
Genotypes, Drought  
tolerant traits, Yield  
attributes

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