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RESEARCH ARTICLE

Screening of acquired thermotolerant ragi [*Eluesina coracana* (L.) Gaertn] genotypes using T.I.R. technique

■ **B. Sujatha, P. Sirisha and Y.V. Bharathi**

SUMMARY

For present population ragi is the major food as it is considered as the power house of health benefits. The production of ragi is coming down slowly due to the climatic factors like temperature and drought. Breeding of selected genotypes with increased thermotolerance is therefore, one of the most vital objective in crop improvement programme. Temperature induction response (TIR) technique has been developed to identify thermotolerant lines. 24 ragi genotypes has been tested using temperature induction response (TIR) technique. Ragi seedlings were exposed to gradual increase in temperature range of 32-48^{0}C for 5hrs and later subjected to the lethal temperature of 54^{0}C for 2 hrs. These treated seedlings were allowed to recover at 30^{0}C and 60% relative humidity for 2 days. After recovery per cent survival, per cent reduction of root growth and per cent reduction of shoot growth was calculated. Among 24 ragi genotypes VR900, Indaf 8 and Udurumalliga were found resistant with low per cent reduction of root and shoot growth and the genotypes VR 1138, CO-7 and OUAT-2 were found susceptible with high per cent reduction of root and shoot growth. By using this TIR technique it is easy to identify thermotolerant lines from a large range of population at the seedling level itself

Key Words : Acquired thermotolerance, Temperature induction response, Lethal temperature

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