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RESEARCH ARTICLE

Study on induced mutations in m_1 generation in sorghum [*Sorghum bicolor* (L.) Moench]

■ **S.M. Surashe, H.V. Kalpande and S.B. Borgaonkar**

SUMMARY

An investigation was carried out to create the variability generated through induced mutation in two sorghum populations *viz.*, 296 B (*Kharif*) and Parbhani Moti (*Rabi*). Two mutagens *viz*., gamma irradiation (10 kR, 20kR, 30kR and 40kR) and EMS (0.1%EMS, 0.2%EMS, 0.3%EMS and 0.3%EMS) and their combination were used M_1 generation. Mutagenic sensitivity in M_1 generation on the basis of reduced germination and plant survival revealed a dose dependent reaction and differential response of the populations. LD_{50} was found to be 20-30 kR in case of gamma irradiation and 0.3-0.4 per cent in EMS irrespective of the genotype. The irradiated population produced more number of superior segregants in respects of seed yield and its contributing traits compared to other populations. Three dwarf mutant, one brown midrib and tree drought tolerance confirmed from Parbhani Moti.

Key Words : Mutation, Segregants, EMS, LD_{50}, Genetic variability

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