



RESEARCH ARTICLE :

Effect of Ethyl Methane Sulphonate (EMS) on sprouting and survival characteristics of garlic (*Allium sativum* L.)

■ CHETNA BANJARE, NEERAJ SHUKLA, PRAVIN KUMAR SHARMA, RAJEEV SHRIVASTAVA AND DEEPIKA CHANDRAVANSHI

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SUMMARY : The experiment was carried out to study the effect of ethyl methane sulphonate (EMS) on sprouting percentage, survival percentage and lethal dose (LD_{50}) of garlic (*Allium sativum* L.) in M_1 generation. There were three garlic genotypes IG-2010-3-2, IG-2009-11-1 and Agrifound White used for the experiment. Garlic cloves were treated with five different concentrations of ethyl methane sulphonate (EMS) viz., 0.1%, 0.4%, 0.8%, 1.2% and 1.6%. A field experiment was conducted during the year 2014-15 in *Rabi* season under All India Network Research Project on Onion and Garlic at Horticulture Instruction cum Research Farm of Department of Vegetable Science, Indira Gandhi Krishi Vishwavidyalaya, Raipur (C.G.). The result indicated that values of all parameters were decreased by increasing concentration of ethyl methane sulphonate (EMS). The LD_{50} values estimated based on the 50% reduction of germination and survival percentage result showed that effect of EMS concentration varies in different genotype.

KEY WORDS :

Garlic, Mutation, Ethyl methane sulphonate, Sprouting percentage, Survival percentage, LD_{50}

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Author for correspondence :

CHETNA BANJARE

Department of Horticulture, Indira Gandhi Krishi Vishwavidyalaya, RAIPUR (C.G.) INDIA
Email : chetna04banjare@gmail.com

See end of the article for authors' affiliations