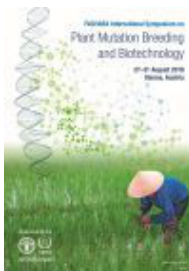


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EFFECT OF EMS ON SEED GERMINATION IN CHICKPEA

Chickpea (*Cicer arietinum* L.) is an ancient crop cultivated in about 40 countries of the world. India is the largest producer sharing 75% of the world's production. In modern agriculture a remarkable progress has been done in increasing the genetic potential for crop productivity. Ethyl Methane Sulfonate (EMS) is a chemical mutagen which was used to test its effect on seed germination in chickpea. *Cicer arietinum* L. seeds with uniform size were subjected to the chemical mutagen by soaking seeds in various concentrations; i.e. 0.1M, 0.2M, 0.3M, 0.4M and 0.5M respectively for about 2 hours. Then, the seeds were placed on wet paper towel to germinate and the percent seed germination was determined on the 4th and 7th day. Results revealed that EMS –the chemical mutagen –had inhibitory effect on seed germination. It showed gradual decrease in germination with the increase in the concentration of chemical mutagen. Maximum 90% seed germination was observed in 0.1M concentration whereas a minimum of 70% seed germination was observed in 0.5M concentration. The present investigation concludes that EMS has inhibitory effect on seed germination, which can be employed in mutation breeding programmes.

Country or International Organization

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Track Classification: Enhancing agricultural biodiversity through new mutation induction techniques