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STUDY ON POSSIBILITY USING OF MUTANT ORNAMENTAL PLANTS IN ORDER TO REVITALIZE THE DESERT REGIONS OF IRAN

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Never before in the history has the issue of desertification been such salient than today. Due to many environmental stresses that caused by desertification problem, it is necessary to introduce or select some plants that have a special tolerance against environmental stresses. Nowadays, the use of biotechnology in plant breeding tolerant against environmental stresses with the progress made in life sciences and discovery of the genetic code, identification of genes and genes responsible for various activities, from one species to another, has been developed exponentially. One of the classic ways of modifying the plant tolerant to biotic and abiotic stresses is the use of mutations induced by physical mutagens (gamma radiation, x-rays, and so forth) and chemical (sodium azide, ethyl methyl sulfonate, and so forth), respectively. Mutant varieties with desirable properties have been recorded on the site of the Atomic Energy Organization (International Energy Agency; IAEA). Thus, mutant varieties of pastures and woodland plants that have been recorded by other countries can be used in atomic energy organization. In this study, some mutant plants (Pasture plants such as Amaranth, grass palvine, and Sudan grass and woodland plants such as crepe-myrtle, berry, and cottonwood) that have been introduced as drought-tolerant mutants were collected from the site of the Atomic Energy Organization the Iran's deserts maps presented by geographic information system (GIS). The results of this study were to introduce those mentioned mutant varieties and evaluate these varieties for combating desertification in Iran.

Keywords: Salinity and drought stress, Mutation breeding, Pasture plants, woodland plants,