MITOTIC AND MEIOTIC CONSEQUENCES OF GAMMA IRRADIATIONS ON DRY SEEDS OF NIGELLA SATIVA L. (BLACK CUMIN)

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Abstract: Dry seeds (moisture content: 19.04%) of Nigella sativa L. (Family: Ranunculaceae; common name - black cumin, spice of commerce) were gamma irradiated (50, 100, 150, and 200 Gray doses) and M₁ (germination frequency, seedling length, lethality, injury, mitotic index, mitotic aberration frequency; meiotic abnormalities, pollen fertility and seed sterility) parameter and M₂ (mutation (macromutants) frequency were studied with an objective to assess mutagenic sensitivity as a pre-requisite for mutation breeding experiment. LD₅₀ was found to be between 50 Gy and 100 Gy. Results obtained are discussed.

Keywords: Gamma irradiations, M₁ parameters, mitotic & meiotic aberrations, Nigella sativa.

REFERENCES


