RADIATION INDUCED BENEFICIAL MUTANTS OF KALUHEENATI RICE VARIETY CULTIVATED IN SRI LANKA

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This study was carried out with the objective of applying radiation induced mutation techniques to explore the possibilities of isolating desirable phenotypic and physiological mutants for their utilization directly in cross breeding programs for the quick improvement and rectification of the defects of the indigenous rice variety, Kaluheenati. This variety which is well adapted in low temperature areas in Sri Lanka posseses few undesirable characters such as tall plant type, leafyness and poor response to fertilizers.

Uniform dry seeds of Kaluheenati rice variety seeds were irradiated with a dosage of 25Kr rays from ^{60}Co source. Panicle progenies of population size 50,000 plants were screened for mutants at Maldeniya and Pussellawa (950m elevation). Eight beneficial mutants in which five early, semi-dwarf; one very early, semi-dwarf; and two late, intermediate were isolated from the Kaluheenati rice variety in the M_2 generation. Changes in hull colour and Kernal shape were also observed in most of the mutants. Further investigation of these beneficial mutants have to be carried out.