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**CHLOROPHYLL MUTATION YIELDS OF EARLIER AND LATER TILLERS IN RICE.**

In mutation breeding work with crops like rice which produce more than one earhead per plant a knowledge whether different earheads of the M1 plant will give significantly different M2 mutation frequencies is of importance. Contrary to the earlier finding of Osone (1983) that later tillers in rice show a decrease in M2 mutation frequency, KarunaKaran and Kiss (1971) have recorded that the first, second and third earheads of the M1 plants did not show any significant difference in the M2 chlorophyll mutation yields. Results of studies on this aspect made on an *indica* rice variety are reported here.

Seeds of a dwarf *indica* rice culture, MN, 54—42 (a hybrid derivative from the cross between Taichung (Native) 1 and PTB. 8) were irradiated with gamma rays at two doses (11 kR and 22 kR) in January, 1972. The M1 crop was raised under transplanted conditions using 20 days old seedlings and planting in singles at 30 cm x 15 cm spacing. The first, second and third earheads in the order of emergence were labelled on 50 random normal—looking plants under each treatment, and these earlots were separately harvested. From each of the selected plants another earlot was also collected which included all the other earheads. M2 chlorophyll mutation yields of these four earlots were separately studied.

The data on the M2 chlorophyll mutation frequencies of the four earlots and their fiducial limits worked out following Stevens (1942) are presented in Table. As seen from these data the differences between the four earlots under study in their M2 chlorophyll mutation yields were not statistically significant at a probability level of five per cent. These data, thus confirm the findings of Karunakaran and Kiss (1971) that the first, second and third earheads of M1 plants do not show any significant difference in their mutation yields.

**സംഗ്രഹം**

ഗോമാരശ്മി പ്രസരണത്തിനു വിധേയമാക്കിയ നെൽവിത്തിൽ roTcragg രണ്ടു തലമുറയിലെ ചെടികളിൽ നിന്നും ആദ്യത്തെ മൂന്നു കതിരുകൾ വേറെ വേറെയും ബാക്കി കതിരുകൾ ഉള്ളതും ഒന്നിച്ചും ശേഖരിച്ച് സന്തതികളെ നിരീക്ഷണത്തിന് വിധേയമാക്കിയപ്പോൾ ക്ഷോഭ രോഹിത മ്യൂട്ടന്റുകളുടെ അനുപാതത്തിൽ ഈ നാലുതരം കതിരുകൾ raxanial സാരമായ വ്യത്യാസമില്ലെന്നു കാണുകയുണ്ടായി.

**Chlorophyll mutation frequencies in  $M_2$  populations from different earhead categories**

Earhead category	Total $M_2$ seedlings studied	Mutation frequency per 100 $M_2$ seedlings.	
		Value	Fiducial limits P = 0.05
first earhead	5710	1.75	08.4—3.22
Second earhead	4412	5.90	2.98—8.84
Third earhead	4471	3.35	1.88—5.53
Total of first three earheads	14593	3.49	3.07—4.12
Rest of the earheads	34622	3.38	2.79—4.05

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