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Relative Performance of Ratna, GR-3 and IR-22 Rice Varieties with Reference to the Age of Their Seedlings under Summar Conditions

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A field trial was conducted at College Farm, Gujarat Agricultural Univeristy, Navsari during summer season of 1975-76 and 1976-77 in split-plot design with varieties (Ratna, GR-3 and IR-22) as main plots and five ages of seedlings at transplanting (30, 40, 50, 60 and 70 days) as sub-plot treatments, replicated four times. A common dose of 120 kg N/ha and 60 kg P_2O_5/ha was applied to all plots. The 50 per cent nitrogen and all P_2O_5 were applied as basal dose at the time of transplanting; the remaining dose of nitrogen was applied in two equal splits i.e. at tillering stage and at panicle initiation stage. The crop was transplanted on 19th February by using different age of seedlings and harvested on 20th May during both the years.

The data (Table-1) revealed that there were significant differences among the grain yield of three varieties. Significantly the highest (3890 kg/ha) grain yield and gross realization (Rs. 5835-00 were obtained with variety IR-22, followed by Ratna and GR-3. Similar findings for varieties Ratna and GR-3 were also reported by Patel (1977).

TABLE 1

Effect of rice varieties and age of seedlings at transplanting.

	Grain yield (kg/ha)			*Gross realization (Rs/ha)*
	1975-76	*1976-77*	*Mean*	
Varieties				
Ratna	3132	3633	3378	5067
GR. 3	2741	3253	2997	4495
IR. 22	3506	4287	3890	5835
S.Em.±	151	218	132	—
C.D. (5%)	523	755	405	—
Age of seedlings				
30 days	2609	3605	3107	4660
40 days	3379	3780	3579	5368
50 days	3846	4419	4135	6202
60 days	3072	3654	3364	5046
70 days	2713	3139	2926	4389
Sm.±	207	234	144	—
C.D. (5%)	596	677	403	—

N.B.: Price of rice grain (unhusked): Rs. 150/q

Singinificantly highest (4135 kg/ha) grain yield and gross realization (Rs. 6202.00) were obtained by transplantir g 50 days old seedlings. This finding is in line with that reported by Patel (1977). The younger seedlings (30 and 40 days) as well as older seedlings (60 and 70 days) than 50 days produced less yield due to the fact that the younger seedlings might not be physiologically mature for transplanting, as low temperature during nursery period might have prevented seedlings grwoth and in older

seedlings they were subject to intensive plant competition in crowded environment of the nursery for longer time.

The interaction effect of varieties into age of seedlings at transplanting was found to be non-significant.

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REFERENCE

Patel, I. S. (1977). Response of rice varieties to age of seedlings in summer season. M.Sc. (Agri.) Thesis submitted to Gujarat Agricultural University, Sardar Krishinagar.