GAU Res. J. 1990, 16 (1) : 39–41

Short Communications

Effect of Seeding in Nursery and Age of Seedings at Transplating for Summer Rice Var. Mashuri

C. L. Patel, Z. G. Patel, I. G. Patel, R. B. Patel and A. G. Naik

Department of Agronomy, G.A.U., Navsari

The field experiment was conducted at the college farm, Gujarat Agricultural University, Navsari Campus, during summer season of 1981-82 and 1982-83 in split-plot design with four dates of seeding in nursery (1st Nov., 15th Nov., 30th Nov., and 15th Dec.) as main plot treatments and three ages of seedlings (45, 55 and 65 days old) as sub-plot treatments with four replications. The crop was fertilized with the recommended dose of fertilizer i.e. 100 kg N/ha and 50 kg P_2O_5/ha. Full quantity of phosphatic fertilizer and half quantity of nitrogenous fertilizer were applied as basal dose at the time of transplanting and the remaining quantity of nitrogen was top dressed in two equal splits, first at tillering stage and second at panicle initiation stage. The crop was transplanted at a distance of 25 cm x 15 cm with two seedlings per hill.

The data presented in Table 1 revealed that the highest grain yield was obtained when the crop was seeded on 30th November in the nursery during both the years, however during 1981-82, it remained statistically at par with 15th November and 15th December. The pooled data also showed the similar trend and it was higher to tune of 23.3, 19.4 and 23.1 per cent over 1st Novtmber, 15th November, 15th December, respectively. The maximum gross realisation (Rs. 9227.0/ha) was also secured from the same date (30th Nov.). This might be due to better establishments of seedlings in nursery.

The yield differences due to different age of seedlings were also found to be significant during both the years. Though the highest grain yield was obtained by transplanting 55 days old seedlings during both the years, it remained statistically at par with 45 days old sedlings during 1981-82. But in pooled data 55 days old seedlings gave outrightly the highest yield (4625 kg/ha). This might be due to better establishment of seedling and more vigour of seedling at the time of transplanting. The results are in contrast to those of Patel (1977) and Parmar (1977), who obtained higher yield from 45 days old seedlings for early and mid late rice varieties.

The pooled data on interaction effect given in Table 2 showed that significantly the highest grain yield (6174 kg/ha) was recorded under the treatment combination of seeding on 30th November and transplanting with 55 days old seedlings. The lowest yield (3347 kg/ha) however, was obtained from a

TABLE 1

Effect of different dates of seeding and age of seedlings at transplanting on grain yield of Mashuri rice grown in summer season.

Treatment	*Grain yield (kg/ha)*			*Gross realisation (Rs/ha)*
	1981-82	1982-83	*Mean*	
Date of seeding				
1st Nov.	3146	4722	3934	7081
15th Nov.	3796	4470	4133	7439
30th Nov.	4511	5742	5126	9227
15th Dec.	3778	4109	3943	7097
S. Em. ±	279	100	61	—
C. D. 5%	894	320	180	—
C. V. %	9.66	7.27	7.50	—
Age of seedlings at transplanting				
45 days	3813	4869	4341	7814
55 days	4269	4982	4625	8325
65 days	3341	4431	3886	6995
S. Em. ±	147	100	36	—
C. D. 5%	429	292	103	—
C. V. %	13.57	8.43	8.52	—
Interaction effect				
S. Em. ±	263	201	73	—
C. D. 5%	767	584	207	—
C. V. %	13.56	8.43	8.52	—

N. B. : Price of rough rice grain Rs. 1.80/kg.

TABLE 2

Interaction effect of date of seeding and age of seedlings at transplanting on grain yield of Mashuri in summer season. (Pooled data)

(Average grain yield (kg/ha)

Date of Seeding	Age of seedlings			
	45 days old	55 days old	65 days old	Mean
1st November	3733	3863	4206	3934
15th November	3893	4380	4125	4133
30th November	5340	6174	3866	5126
15th December	4397	4086	3347	3943
Mean	4341	4625	3886	

S. Em. ±	73
C. D. 5%	207

crop seeded on 15th December and transplanted with 65 days old seedlings. The yield showed increasing trend when seeded up to 30th November and transplanted with 45 and 55 days old seedlings, further delay in seeding up to 15th December caused decline in grain yield. Drastic reduction in yield was noted with each delay in sowing after 15th November and transplanting with 65 days old seedlings. Transplanted shock to young seedlings during cold days hinder the establishment of the crop for earlier seeded crop, old seedlings proved less vigourous and recorded poor yield.

(Received on 22nd July, 1985)

REFERENCES

Parmar, T. H. (1977). Response of certain rice varieties to graded N. P. fertility levels with different dates of transplanting in summer season. M. Sc. (Agri) thesis submitted to GAU, Sardar Krushinagar.

Patel, I. S. (1977). Response of rice varieties to age of seedlings in summer season. M. Sc. (Agri) thesis submitted to GAU, Sardar Krushinagar.