

Influence of Season and Levels of Nitrogen on Rice Varieties

Under the auspices of All India Rice Improvement Project, in a nitrogen cum varietal trial promising medium duration rice varieties under different graded doses of N viz., 0, 50 and 100 kg/ha were raised to study their yield potential. The results obtained from these trials conducted in *kharif* 1972 and summer 1972 and 1973, are presented in this note.

The grain yield data of medium duration rice varieties under the influence of various nitrogen levels are furnished in Tables 1, 2 and 3.

Summer Season: (January to May) Under 'O' level of N, all the rice varieties except RP 4-2, IR 22, IET 1996, IET 1039 (Jayanti) and 1991 have recorded higher grain yield (Tables 1 and 3). The rice varieties which gave significantly higher grain yields at 'O' level of N were Bhavani, IR 20, Jaya, and Vijaya, and the yield range was 4120 to 5805 kg/ha. At 50 kg N level, the varieties that have given significantly higher grain yield were IET 2254, IET 1039 (Jayanti), Bhavani, Jaya, Vijaya, IR 20, IR 22 and IET 1991 (Sona) and the grain yield ranged from 5232 to 7107 kg per hectare.

TABLE 1. The mean grain yield (kg/ha) of rice varieties at three different levels of nitrogen (Summer 1972)

Rice variety	Mean grain yield (kg/ha)		
	0 kg N/ha	50 kg N/ha	100 kg N/ha
IR 20	5013	6861	7828
IR 22	4046	6339	7829
RP 4-2	4372	5474	7381
IET 1991	5325	5965	6821
CR10-4103	4656	5613	5842
Cul. 14503	5217	5965	7513
Jaya	5594	7107	7969
Vijaya	5805	6984	7494

For N levels between varieties C. D = 1186

TABLE 2. Mean grain yield of rice varieties at three different levels of nitrogen during *kharif* (1972)

Rice variety	Mean grain yield (kg/ha)		
	0 kg N/ha	50 kg N/ha	100 kg N/ha
Jaya	3935	4666	5343
Vijaya	4025	3943	5628
IR 20	2891	3537	4439
IET 1039 (Jayanti)	3187	4399	4755
IET 1991 (Sona)	3651	4470	4933
RP 4-2	3829	4060	4862
RP 4-14 (IET 2254)	4039	4921	5680
CO 36	3312	5129	5801
For N levels between varieties C. D = 612			

TABLE 3. Mean grain yield of rice varieties at three different levels of nitrogen during *summer* (1973)

Rice variety	Mean grain yield (kg/ha)		
	Nitrogen levels kg/ha		
	0	50	100
Jaya	4587	5121	6633
IET 1039 (Jayanti)	3740	4506	4476
IET 2295	4496	5494	5857
IET 2885	4476	4409	5776
IET 1991 (Sona)	3125	4002	3952
IET 1996	4214	4355	4950
IET 2254	4899	5897	6099
Bhavani	5020	4232	4808
For N levels between varieties C. D = 915			

Kharif season: (June-November)

At 'O' level of N, the varieties which registered higher grain yield were IET 2254, Vijaya, Jaya, RP4-2 and IET 1991. At 50 kg N/ha level, variety CO 36 ranked first in grain yield and it was on par with IET 2254 (RP4-14) and Jaya. IET 1039 and IET 1991, on the other hand, were on par with Jaya. The grain yield of the varieties listed ranged between 4899 to 5129 kg/ha.

Comparing seasonal influence on varieties and nitrogen levels in general, it is seen that in summer, the yield of rice varieties are better compared to Kharif season. It is also seen that in

summer, Bhavani, IET 2254, Jaya, IR 20, IET 1991, IET 2295 and IET 2885 registered higher grain yields. At the 50 kg N level, Bhavani, IET 2254, Jaya, Vijaya, IET 1991 and IET 2295 performed well in *kharif* season. The varieties which gave higher yields at 'O' N level were CO 36, IET 2254, Vijaya, Jaya and RP4-2, and at 50 kg N level, CO 36, IET 2254 and Jaya did well.

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A Note on Mixed Cropping in Dryland Cotton (Bharathi)

With the object of finding out the most suitable mixed crops for dryland Cambodia cotton, a replicated trial was conducted at Kovilpatti in Tirunelveli District on black cotton soil under the All India Co-ordinated Cotton Improvement Project during 73—74 season. The treatments mentioned below were included for the study:

1. Normal row planting
2. Paired row planting
3. Paired row planting + 1 row of coriander
4. Paired row planting + 1 row of greengram
5. Paired row planting + 1 row of thenai

6. Paired row planting + 2 rows of coriander
7. Paired row planting + 2 rows of greengram
8. Paired row planting + 2 rows of thenai
9. Alternate row (1:1) with coriander
10. Alternate row (1:1) with greengram
11. Alternate row (1:1) with thenai

The varieties included for the studies were: Cotton MCU 6 (Bharathi) Green gram (Hissar), Coriander-CO 1 and Thenai MS 1844/2-1.