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Evaluation of Rice Varieties in *Kharif* Season.

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Eight varieties of rice (DR-92, JR 16-15-1-1/Geeta, IR-28, IR-30, Lalita/Cauvery, R-2369/Madhuri, RWR 5-4 and Kranti) were grown under low and high levels of N (60 and 120 Kg/ha) in a randomised-block design with three replications in *Kharif*, 1978 and 1979. Number of productive tillers per plant was the major yield-attributing character. Among the extra-early varieties, DR-92 yielding 45 q/ha was superior to JR 16-15-1-1 or Geeta. Among the early varieties, RWR 5-4 was the best. The medium duration 'Kranti' was unsuitable. Increasing N application increased the yield.

The present strategy of rice production involves the use of high-yielding varieties and nitrogenous fertilizers. Early-maturing varieties have potential in multiple-cropping programmes. Several varieties have been newly introduced which have considerable variation in yield potential, duration and fertilizer response. Therefore, this evaluation of some new varieties was undertaken in *kharif* season.

MATERIAL AND METHODS

The experiment was laid out in *kharif*, 1978 and 1979 in a clay-loam soil of the College Farm. The rainfall data for the crop period is presented in Table I. Eight varieties of paddy (DR-92, JR16-15-1-1/Geeta, IR-28, IR-30, Lalita/Cauvery, R-2369/Madhuri, RWR 5-4 and Kranti) were grown under low and high levels of N (60 and 120 kg/ha) in a randomised-block design with three replications. The plot size was 3.0 m × 3.6 m. Half dose of N (30 and 60 kg), and the full dose of 60 kg P_2O_5/ha were applied at the time of last puddling. The remaining half dose of N was top-dressed in two-split doses, one at tillering and another at panicle-initiation stage. The application of potash was not considered essential due to its high reserve in the soil. Yield components and yield were recorded.

RESULTS AND DISCUSSION

The varieties differed in the number of productive tillers and yield (Table II). Higher level of N improved the yield significantly over lower level. Productive tillers were the highest in RWR 5-4 followed by IR-28 and IR-30.

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Among the extra-early varieties, DR-92 produced 6.86 q/ha more yield than JR16-15-1-1 and Geeta. Among the early varieties, RWR 5-4 was the highest yielder (56.5 q/ha) followed by IR-28 (50.4 q/ha) and IR-30 (49.8 q/ha). The medium variety, "Kranti" proved unsuitable due to very low yield.

Higher level of N (120 kg/ha) gave 8.7 q/ha more yield over the lower level (60 kg/ha). Hence, higher level is beneficial for all the varieties tested.

Table I Rainfall data

Month	Rainfall (mm)		No. of rainy days	
	1978	1979	1978	1979
June	91.6	73.2	4	7
July	319.9	194 0	16	11
August	468.8	128.0	17	8
September	372 0	62.2	13	4
October	169.0	2.2	8	1
Total	1421.3	459.6	58	34

TABLE II Yield and Yield Compouents

Varieites	Parentage	Maturity (days)	No. of produetive tillers/plant		Mean	Grain-yield (q/ha)		Mean
			1978	1979		1978	1979	
Extra-early								
DR-92		80-85	9.0	8.7	8 8	53.00	37.26	45.13
JR 16-15-1-1/Geeta*	CR-44-35xJR-2-331/ do	90.95	8.2	8.5*	8.3	42.24	34.30*	38 27
Early varieties								
IR-28	IR-833xIR-2042	105-110	11.3	10 1	10.7	59 00	41.76	50.38
IR-30	IR-26 X IR-2147	105-110	11.4	9.6	10.5	59 36	40.32	49·84
Lalita/Cauvery*	CR-44-35 X Lallo-14/ Nil	105-110	8.9	11.7*	10.3	45.50	47.40*	46.45
R-2369/Madhuri*	Hamsa X Cross 116/ Dubraj X Kalimoonch	120-125	10.1	8.5*	9.3	51.60	36.58*	44.09
RWR-5-4-	Sona XLondhi	120.125	13.1	11.9	12.5	63.86	49 07	56.46
Medium varieties								
Kranti	IR-8 X Cross 116	125-130	9.5	11.1	10.3	59.66	48.23	53.94
C. D. (5%)			1.14	1.91		4.93	9.25	
Levels of nitrogen								
60 kg/ha			9.4	8.6	9.0	51.68	35.73	43.70
120 kg/ha			10.9	11.5	11.2	56 87	47.99	52.43
C. D. (5%)			0.57	0.95		2.45	4.61	

*Varieties grown in the year 1979