

## **Effect of different doses of Nitrogen Fertilizer on rice promising cultures**

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Nitrogen fertilizer is the major input in rice production and the optimum rate and application assure profitability and sustainability of the rice production. This study aims to investigate promising cultures of rice in response to different nitrogen fertilizer levels. Field experiment was carried out during *kharif* 2017 at Regional Agricultural Research Station, Polasa, Jagtial, Telangana State. The effect of nitrogen fertilizer on the growth and yield of eight rice cultures (RNR-11718, WGL-915, KNM-733, JGL-24423, JGL-H-1, MTU-1001, MTU-1010, RNR-15048). The experiment was laid out in a Split plot design, replicated three times. The results showed that Plant height, number of tiller/ sq.m, Panicle length, grain yield (kg/ha) and straw yield (kg/ha) were significantly influenced by the different levels of nitrogen application. Grain yield was significantly influenced by application of 60, 120 and 180 kg N/ha. Significantly higher mean grain yield was realized with application of 180 kg N/ha (7646 kg/ha) which was at par with application of 120 kg N/ha (7494 kg/ha). Among the varieties JGL 24423 has produced significantly higher grain yield (8381 kg/ha) which was at par with KNM 733 (8346 kg/ha) and JGL H-1 (8244 kg/ha), over other varieties.

**Table: Effect of varieties/hybrid and N levels on growth, yield attributes and yield of Rice**

<b>Treatments</b>	<b>Plant height at harvest (cm)</b>	<b>Tillers/sq.m</b>	<b>Panicle length(cm)</b>	<b>Grain Yield(kg/ha)</b>	<b>Straw Yield(kg/ha)</b>	<b>Harvest Index(%)</b>
<b>Nitrogen Levels(kg/ha)</b>						
N1-60	102.3	320	23.2	6979	7546	48.05
N2-120	113.8	334	25.9	7494	7824	48.92
N3-180	122.9	353	25.0	7646	8054	48.70
SEm±	4.4	11	0.5	242	134.6	
CD (p=0.05)	12.3	31	1.4	518	528	
RNR 11718	103.8	324	23.8	6321	6934	47.69
KNM 733	99.1	355	22.3	8346	8701	48.96
JGL H1	114.4	344	22.8	8244	8350	49.68
MTU 1010	113.1	322	22.9	6167	6603	48.29
WGL 915	121.5	342	26.4	7863	8325	48.57

JGL 24423	121.8	369	26.9	8381	8747	48.93
MTU 1001	119.9	326	27.7	7573	8030	48.54
SEm±	8.3	23	0.7	242	360.8	
CD (p=0.05)	16.2	46	1.4	518	1000	