Yield and yield components in main and full plant ratoon crops. Faizabad, India, 1986.

Variety	Main						Ratoon crop					Total	
	Duration (d)	Tillers/ plant	Effective tillers/ plant	Grains/ panicle	1000-grain wt (g)	Yield (t/ha)	Duration (d)	Effective tillers/ plant	Grains/ panicle	1000-grain wt (g)	Yield (t/ha)	Duration (d)	Yield (t/ha)
NDR119	94	18	16	86	16.5	3.0	33	15	81.0	16.2	2.4	127	5.4
NDR1001	90	17	16	88	16.0	3.2	36	14	83.0	15.8	2.7	126	5.8
NDR118	96	16	15	94	18.0	3.6	35	14	90.0	17.7	2.0	131	5.6
NDR102	95	17	14	92	17.5	3.7	34	16	89.0	17.2	2.1	129	5.8
NDR312	97	18	15	91	17.8	3.6	36	15	85.0	17.6	2.1	133	5.6
CD (0.05)						0.7					0.6		

crop by harvesting only panicles, leaving the leaves and stem intact. New shoots arose from higher nodes, instead of the ground tillers as in traditional ratooning. The number of branches emerging from each tiller and total tillers approached the number in the main crop, and in some plants even exceeded it.

Each branch developed 2-3 small leaves. Panicle size almost matched that of the main crop. The ratoon crop matured in 34-36 d, with yield levels approaching 80-85% of the main crop (see table).

The experiment was conducted with very short-duration varieties. The nursery was sown on 19 Jun 1986, 25-d-old seedlings were transplanted at 1 seedling/ hill in 12- × 5-m plots with 20- × 15-cm spacing and 60-30-30 kg NPK/ha. The ratoon crop was fertilized with 30-75 kg NP/ha.

Yields of the different varieties were similar. This technique costs more because of the need for hand sickle harvesting of the main crop without disturbing the shoot system.□

Effect of phosphates on flooded rice

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We evaluated superphosphate (SP), Mussoorie rock phosphate (MRP), and Mussoorie rock phosphate plus superphosphate (MRP + SP) and diammonium phosphate (DAP) in the midland soils of coastal Karnataka during the 1984 and 1985 wet seasons.

Soil was sandy clay loam, Ustoxtropept with pH 5.0, electrical conductivity 0.2 dS/m at 25 °C, 1.26% organic C, 56 kg P/ha, and 83 kg K/ha. Available micronutrients (in ppm) were Zn 0.25, Cu 1.86, Mn 0.38, Fe 57.7, and B 0.50. The experiment was in a split-plot design with P sources in main plots and P levels in subplots, including a no-P control.

Three 27-d-old IET2911 (medium duration) seedlings/ hill were transplanted at 15- ×15-cm spacing. All plots received 100 kg N and 88 kg K/ha. Half the N was applied at transplanting, 25% at tillering, and 25% at panicle initiation. P was applied at transplanting.

The field was flooded from transplanting to maturity and the crop protected from insects, diseases, and weeds.

Fertilizer sources gave significantly different yields in both years (see table). The higher yield with SP alone or DAP were comparable to that with MRP + SP (25% + 75%).

Yield with 26.4 kg P/ha was significantly higher than with other levels. The interaction effects were also significant in 1985-86. Locally available MRP is an inexpensive source of P.□

Effect of P source and level on rice yield. Mangalore, India, 1984-86.

Treatment	Grain yield (t/ha)	
	1984-85	1985-86
Main plot		
Control	3.3	3.1
SP	3.9	3.5
MRP	3.3	3.1
MRP + SP (75 + 25)	3.5	3.2
MRP + SP (50 + 50)	3.6	3.2
MRP + SP (25 + 75)	3.8	3.4
DAP	3.9	3.5
F test	*	*
SEm ±	0.12	0.06
CD (0.05)	0.3	0.2
Subplot		
0 kg P/ha	3.3	3.0
13.2 kg P/ha	3.6	3.3
26.4 kg P/ha	3.8	3.4
39.6 kg P/ha	3.8	3.3
F test	ns	0.01
SEm ±	0.14	0.04
CD (0.05)	ns	0.1
Interaction	ns	Significant

Effect of basally applied coated urea on grain yield

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In Cauvery Delta, farmers usually apply N as urea in split doses. But with monsoon weather, water stagnation in the field, and social factors, N often is not applied on time.

We compared N applied in a single basal dose as coal-tar-coated urea (CCU), neem-coated urea (NCU), sulfur-coated urea (SCU), and urea supergranules (USG), to N applied in 3 splits (50% basal, 25% at tillering, and 25% at panicle initiation) as prilled urea (PU).

Two experiments were conducted Jun-Sep 1983 and 1984 using short-duration rice varieties (110-115 d) in a randomized block design with four