

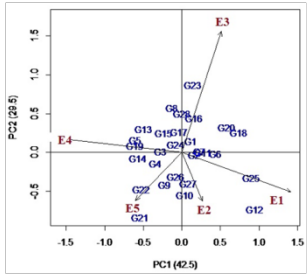
Supplementary Table 1 Characteristic features of the test environments

Environment code	Location	Zone	latitude	longitude	Altitude (m above MSL)	Mean Rainfall (mm)	Soil pH	Soil Fe content (ppm)	Soil Zn content (ppm)	Soil type
E1	Hyderabad	VII (Southern)	17°31'02"N	78°16'43"E	542.00	999.0	8.4-8.5	34.2	3.4	Clay loam
E2	New Delhi	II (Northern)	28°38'23"N	77°09'27"E	228.61	990.9	7.4-7.8	12.3	3.3	Sandy loam
E3	Cuttack	III (Eastern)	20°30'N,	85°40' E	36.00	1515.0	5-6.5	30.5	3.5	Sandy clay loam
E4	Raipur	V (Central)	21.25 14° N	81.6296° E	298.00	1489.0	7.1-7.3	27.5	3.3	Loamy clay
E5	Coimbatore	VII (Southern)	11° N	77° E	426.72	618.0	6.0-6.2	29.0	1.2	Sandy clay

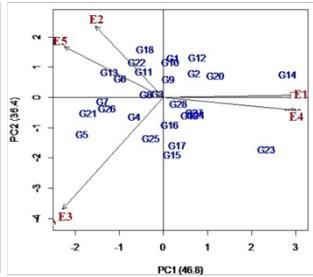
Supplementary Table 2 Mean performance of the 28 rice genotypes across the test environments

	Name	Source	Genotype	Fe	Zn	DFF	PH	PL	SPY
G1	Akutphou	IIRR	Variety	2.333 ^{abcde}	21.08 ^{bc}	94.8 ^{abcde}	138.17 ^{abcd}	25.13 ^{abc}	15.89 ^{abcde}
G2	Edavankudipokkali	IIRR	Landrace	2.427 ^{abcde}	23.89 ^{bc}	89.74 ^{abcde}	143.4 ^{ab}	26.11 ^{abc}	15.68 ^{abcde}
G3	Kadamkudipokkali	IIRR	Landrace	2.507 ^{abcde}	16.54 ^{bc}	107.47 ^a	97.36 ^{bcd}	22.95 ^{bc}	16.89 ^{abcde}
G4	Taraori Basmati	IIRR	Selection	3.833 ^{abc}	25.75 ^{bc}	97.37 ^{abcd}	141.13 ^{abc}	27.18 ^{ab}	12.67 ^{cdef}
G5	Kalanamak	IIRR	Landrace	3.54 ^{abcd}	19.31 ^{bc}	107.6 ^{abc}	141.64 ^{abc}	25.81 ^{abc}	14.27 ^{abcde}
G6	BPT5204	IIRR	Variety	3.327 ^{abcde}	16.28 ^{bc}	108.33 ^{ab}	85.06 ^d	19.20 ^c	15.85 ^{abcde}
G7	ARC10063	NRRI	Landrace	2.313 ^{abcde}	24.13 ^{bc}	103.6 ^{abc}	146.6 ^{abc}	27.85 ^{ab}	15.18 ^{abcde}
G8	ARC10075	NRRI	Landrace	1.727 ^{de}	14.95 ^{bc}	93.93 ^{abcde}	129.8 ^{abcd}	25.21 ^{abc}	22.88 ^a
G9	Bindli	NRRI	Landrace	2.627 ^{abcde}	18.95 ^{bc}	82.93 ^{de}	117.89 ^{abcd}	26.112 ^{abc}	16.68 ^{abcde}
G10	Sneha	NRRI	Variety	1.646 ^{de}	13.873 ^c	91.76 ^{bcde}	107.9 ^{bcd}	24.84 ^{abc}	21.59 ^{ab}
G11	Chittimuthyalu	IIRR	Landrace	3.813 ^{abc}	20.59 ^{bc}	109.38 ^{abcd}	151.48 ^{ab}	25.85 ^{abc}	10.39 ^{def}
G12	IC2127	IARI	Landrace	3.387 ^{abcde}	20.57 ^{bc}	98.11 ^{abcde}	154.36 ^{ab}	27.51 ^{ab}	18.64 ^{abcd}
G13	Uphar	IARI	Variety	2.233 ^{bcde}	15.17 ^{bc}	103.2 ^{abc}	128.56 ^{abcd}	25.62 ^{abc}	20.20 ^{abc}
G14	Karuppunel	IARI	Landrace	4.333 ^a	41.05 ^a	88.3 ^{cde}	134.29 ^{abcd}	22.77 ^{bc}	11.62 ^{def}
G15	KalamGurmatiya	IGKV	Landrace	1.893 ^{cde}	23.37 ^{bc}	92.53 ^{abcde}	133.78 ^{abcd}	25.53 ^{abc}	9.36 ^{ef}
G16	Jeeradhan	IGKV	Landrace	3.253 ^{abcde}	21.07 ^{bc}	90.6 ^{abcde}	139.17 ^{abcd}	24.96 ^{abc}	6.42 ^f
G17	Bangla Gurmatiya	IGKV	Landrace	2.26 ^{bcde}	21.19 ^{bc}	96.93 ^{abcde}	144.03 ^{ab}	24.53 ^{abc}	18.72 ^{abcd}
G18	Tilakasturi	IGKV	Landrace	4.287 ^a	21.84 ^{bc}	94.87 ^{abcde}	146.27 ^{abc}	28.28 ^{ab}	13.56 ^{abcde}
G19	IC39822	IGKV	Landrace	3.027 ^{abcde}	21.26 ^{bc}	83.95 ^{de}	118.03 ^{abcd}	21.69 ^{bc}	11.00 ^{def}
G20	ThukiGurmatiya	IGKV	Landrace	2.6 ^{abcde}	19.75 ^{bc}	82.07 ^e	93.87 ^{cd}	21.51 ^{bc}	10.56 ^{def}
G21	ShyamJeera	IGKV	Landrace	2.9 ^{abcde}	17.75 ^{bc}	96.6 ^{abcde}	162.83 ^a	30.95 ^a	13.55 ^{abcde}
G22	ShuklaPhool	IGKV	Landrace	2.847 ^{abcde}	14.98 ^{bc}	93.2 ^{abcde}	157.15 ^{ab}	30.50 ^a	10.70 ^{def}
G23	PandariGurmatiya	IGKV	Landrace	2.087 ^{bcde}	25.18 ^{bc}	93.97 ^{bcde}	133.77 ^{abcd}	22.23 ^{bc}	12.45 ^{def}
G24	BotkiGurmatiya	IGKV	Landrace	2.327 ^{bcde}	21.13 ^{bc}	91.58 ^{abcde}	152.81 ^{ab}	27.74 ^{ab}	13.68 ^{abcde}
G25	IC36704	IGKV	Landrace	3.78 ^{ab}	22.9 ^{bc}	94.6 ^{abcde}	101.82 ^{bcd}	23.15 ^{bc}	8.13 ^{ef}
G26	ARB6001	UAS-B	Breeding line	1.58 ^e	14.67 ^{bc}	95.27 ^{abcd}	113.91 ^{abcd}	26.30 ^{abc}	10.87 ^{def}
G27	ARB6033	UAS-B	Breeding line	2.22 ^{bcde}	22.39 ^{bc}	91.07 ^{abcde}	87.45 ^{cd}	22.94 ^{bc}	12.80 ^{cdef}
G28	ARB6065	UAS-B	Breeding line	2.007 ^{bcde}	26.25 ^b	95.23 ^{abcd}	146.68 ^{ab}	30.14 ^a	11.76 ^{def}

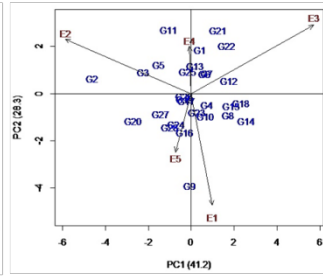
*As per Duncan's grouping means with the same letters are not significantly different and means with different letters are significantly different.
Fe, iron in polished rice; Zn, zinc in polished rice; DFF, days to 50% flowering; PH, plant height; PL, panicle length; SPY, single plant yield.



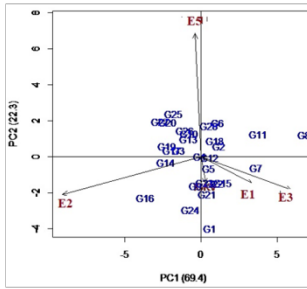
Fe



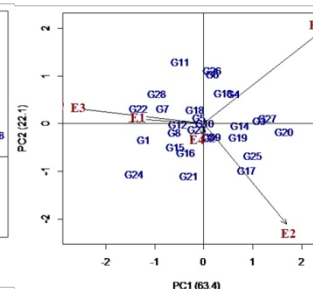
Zn



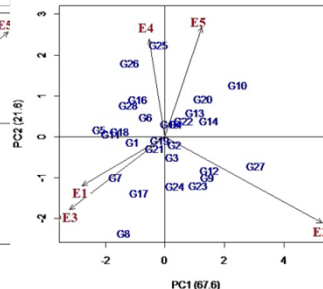
DFF



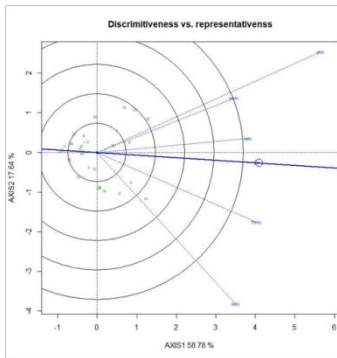
PH



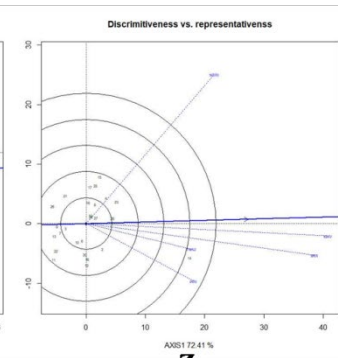
PL



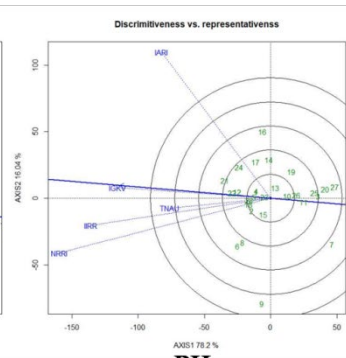
SPY



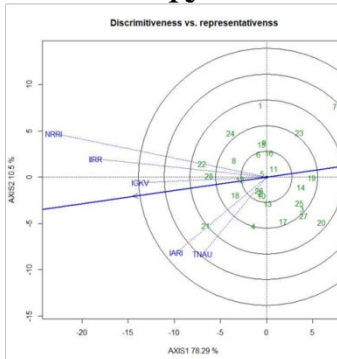
Fe



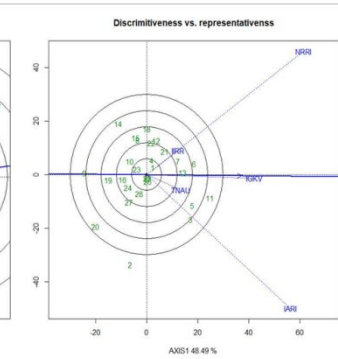
Zn



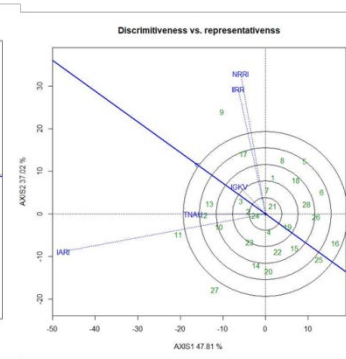
PH



PL



DFF



SPY