

Supplementary Information

Appendix 1

Accession code	Landrace	STATE OF ORIGIN	Cr (mg/kg)	Mn (mg/kg)	Fe (mg/kg)	Ni (mg/kg)	Co (mg/kg)	Cu (mg/kg)	Cd (mg/kg)	As (mg/kg)	Pb (mg/kg)	Sb (mg/kg)	Zn (mg/kg)	Ag (mg/kg)
A10	ARUNURVADLLU	KARNATAKA	1.31	24.0	0.0	0.2	0.1	2.2	0.0	0.0	0.3	0.0	23.9	0.0
AA22	ASANCHURI	WEST BENGAL	11.44	39.0	43.6	6.0	0.2	1.7	0.0	0.1	0.2	0.0	33.2	0.0
AA01	ASANLEYA	WEST BENGAL	1.43	20.18	18.88	2.82	0.05	3.4	0.07	0.05	0	0.02	16.66	0.33
AA19	AURAR	ASSAM	1.63	51.01	40.1	2.3	0.24	4.51	0.02	0.1	0.67	0.05	37.39	0.41
AA07	AUSHA BONKATA	WEST BENGAL	8.01	25.9	55.2	4.2	0.1	2.2	0.0	0.1	0.2	0.0	19.5	0.0
B22	BADABONA	WEST BENGAL	9.17	37.4	47.0	5.3	0.1	1.9	0.0	0.0	0.2	0.0	23.1	0.0
B06	BAGH JHAPTA	WEST BENGAL	11.14	37.1	64.8	6.0	0.2	1.6	0.0	0.1	0.1	0.0	23.5	0.0
B12	BAHURUPI	WEST BENGAL	2.21	25.47	23.09	1.42	0.1	3.32	0.04	0.13	0	0.01	26.14	0
B05	BAID	WEST BENGAL	6.64	30.9	33.1	3.0	0.1	1.1	0.0	0.1	0.2	0.0	23.7	0.0
	KALAMKATHI													
B21	BAKUL PHOOL	WEST BENGAL	0.00	62.8	0.0	0.0	0.0	28.4	0.0	0.1	0.3	0.0	18.2	0.2
B03	BALI BHAJNA	WEST BENGAL	1.56	28.39	25.7	2.7	0.13	3.09	0	0.07	0	0.02	34.19	0.27
B82	BETGUTI XALI	ASSAM	5.87	39.8	25.8	2.5	0.1	1.7	0.0	0.0	0.2	0.0	19.1	0.0
V13	BHERAL	WEST BENGAL	5.34	20.5	24.8	2.2	0.1	0.6	0.0	0.1	0.2	0.0	26.2	1.4
V28	BHOG PRASAD	ASSAM	0.00	43.5	0.0	0.0	0.0	2.2	0.0	0.0	1.1	0.0	24.4	0.5
V19	BHOGL AYA	ODISHA	5.28	29.8	21.6	2.1	0.1	1.3	0.0	0.1	0.2	0.0	21.6	0.0
V06	BHURI SHULAH	WEST BENGAL	15.81	38.5	85.5	9.5	0.2	3.4	0.1	0.1	0.2	0.0	33.1	2.5
B68	BOLOI GENTI	WEST BENGAL	5.82	20.5	39.5	3.1	0.1	2.3	0.0	0.1	0.1	0.0	18.8	0.0
B53	BORO ABJI	BANGLADESH	4.19	31.0	17.4	1.7	0.1	0.9	0.0	0.1	0.2	0.0	22.7	0.0
B28	BOURANI	WEST BENGAL	7.88	23.7	47.8	3.9	0.3	1.9	0.0	0.1	0.2	0.0	16.4	0.0
C13	CHEENA KAMINI	WEST BENGAL	8.86	48.7	67.6	5.2	0.1	2.2	0.0	0.0	0.2	0.0	20.3	0.3
C06	CHENGA	WEST BENGAL	0.00	17.8	1.1	0.0	0.0	0.9	0.0	0.1	0.3	0.0	14.4	0.0
C20	CHILA METEH	WEST BENGAL	6.91	31.2	38.2	3.9	0.1	0.8	0.0	0.1	0.2	0.0	22.5	0.3
C21	CHINNA PONI	KARNATAKA	1.97	43.13	34.74	2.1	0.11	3.99	0.02	0.11	0	0.03	32	0.06
DD02	DARKA-SAL	WEST BENGAL	1.27	26.1	14.37	1.37	0.04	3.81	0.07	0.08	0	0	37.69	0.11
DD03	DASHAHARA	ODISHA	2.21	23.21	17.39	1.37	0.05	2.54	0	0.11	0.02	0.01	30.62	0.32
	JHUTI													
DD18	DASHRA MATHIYA	ODISHA	1.87	50.9	38.37	2.49	0.13	3.78	0.02	0.16	0.13	0.03	33.27	0.08
DD05	DEHRADUN	WEST BENGAL	6.69	34.2	52.2	3.1	0.1	1.4	0.0	0.1	0.1	0.0	27.5	0.0
D03	DEPUTY-SAL	WEST BENGAL	8.86	35.2	49.9	5.5	0.1	2.5	0.1	0.1	0.2	0.0	25.1	2.4
DD10	DEULABHOG	WEST BENGAL	7.22	34.0	56.6	3.8	0.1	2.5	0.0	0.1	0.1	0.0	27.3	0.1
DD31	DOLLE KATTIKE	WEST BENGAL	2.87	30.3	13.1	0.9	0.1	2.0	0.0	0.0	0.3	0.0	25.8	0.0
DD16	DUDHE BOLTA	WEST BENGAL	7.83	26.0	130.9	12.9	0.1	0.7	0.0	0.1	0.2	0.0	24.8	0.0
E03	EKAHARI	ASSAM	5.68	32.4	28.7	2.4	0.1	0.6	0.0	0.1	0.2	0.0	19.5	0.0
E02	ERI	ASSAM	2.26	36.07	5.68	2.05	0.03	3.78	0.12	0	0	0	25.6	0.65
G19	GANDHESWARI	WEST BENGAL	13.13	41.5	63.4	6.5	0.2	0.7	0.0	0.1	0.2	0.0	22.5	0.0
G02	GARIB-SAL	WEST BENGAL	1.51	35.02	11.99	1.79	0.2	19.28	0.05	0.1	0	0	155.31	15.61
G21	GAYERBOT	WEST BENGAL	8.01	29.6	46.0	4.4	0.2	1.2	0.0	0.1	0.4	0.0	27.4	0.1
G06	GENTU	WEST BENGAL	0.00	127.9	0.0	0.0	0.0	28.4	0.0	0.1	0.4	0.0	18.3	0.2
W03	GHAIYA	WEST BENGAL	1.21	32.61	0.81	0.75	0.12	2.02	0	0.21	0	0	39.51	0.04
W07	GHUNSI	WEST BENGAL	9.17	51.3	45.7	4.6	0.1	1.8	0.0	0.1	0.3	0.0	22.4	0.0

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W08	GHUSURI	WEST BENGAL	5.08	38.5	19.7	1.7	0.1	1.2	0.0	0.0	0.1	0.0	18.3	0.9
G12	GOPALBHOG	WEST BENGAL	1.10	78.4	0.4	0.1	0.1	27.2	0.0	0.2	0.3	0.0	19.1	0.0
H23	HAMILTON	WEST BENGAL	7.22	33.7	43.1	3.5	0.1	1.7	0.0	0.0	0.2	0.0	20.9	0.0
H21	HATI DHAN	BIHAR	1.17	23.71	0.35	1.16	0.03	3.19	0	0	0	0	25.03	0
H05	HINCHE SAROO	WEST BENGAL	0.06	20.8	5.1	0.0	0.0	0.8	0.0	0.0	0.4	0.0	28.9	0.1
I01	INDRA-SAL	WEST BENGAL	0.00	17.3	0.0	0.0	0.0	1.6	0.0	0.1	0.6	0.0	16.5	0.0
J13	JAL KAMINI	WEST BENGAL	7.94	31.9	39.0	4.2	0.2	1.2	0.0	0.1	0.3	0.0	41.9	0.1
J15	JATA LETA-SAL	WEST BENGAL	3.91	27.8	12.3	1.0	0.1	0.3	0.0	0.1	0.1	0.0	26.3	0.0
Z06	JHINGA	WEST BENGAL	6.51	36.3	33.1	3.2	0.1	2.0	0.0	0.0	0.2	0.0	19.2	3.7
J05	JUNGLI JATA	WEST BENGAL	0.50	82.2	0.2	0.2	0.1	26.9	0.0	0.1	0.3	0.0	17.9	0.2
K50	KABIRAJ-SAL	WEST BENGAL	6.83	28.3	31.4	3.0	0.1	0.4	0.0	0.0	0.2	0.0	20.3	0.0
K43	KAJAL KATHI	WEST BENGAL	2.72	27.1	8.4	0.7	0.1	1.3	0.0	0.0	0.1	0.0	23.2	0.0
K80	KAJLI	WEST BENGAL	6.68	28.9	44.3	3.3	0.1	1.7	0.0	0.1	0.1	0.0	21.8	0.0
K88	KALA KOLLI	ODISHA	0.00	35.2	0.0	0.0	0.0	2.4	0.0	0.1	1.1	0.0	30.9	0.3
K56	KALA LAHI	ASSAM	1.83	41.9	5.5	0.0	0.0	1.3	0.0	0.0	0.2	0.0	18.1	0.0
K68	KALI JIRA	BANGLADESH	5.31	34.9	21.9	2.0	0.1	1.5	0.0	0.0	0.2	0.0	22.8	0.0
K27	KALIRAY	WEST BENGAL	1.40	99.9	0.5	0.1	0.1	27.9	0.0	0.1	0.2	0.0	20.3	0.0
K35	KALO BAHNI	ASSAM	1.55	46.12	25.54	2.13	0.1	2.98	0.02	0.08	0	0.02	24.3	0.55
K74	KALO BHAT	ODISHA	1.61	53.13	6.09	1.3	0.07	3.12	0	0.2	0	0	40.03	0.1
K62	KALO JOHA	ASSAM	1.92	31.01	2.77	2.04	0.03	4.02	0.03	0	0	0	24.82	0.28
K49	KALO METEH	WEST BENGAL	5.59	30.9	24.4	2.1	0.1	0.6	0.0	0.1	0.2	0.0	20.7	0.0
K52	KAMINI	WEST BENGAL	4.07	40.7	15.5	1.1	0.1	0.7	0.0	0.0	0.2	0.0	18.2	0.0
K14	KANKURIA	WEST BENGAL	9.74	35.8	50.7	4.9	0.1	1.1	0.0	0.1	0.1	0.0	22.0	0.0
K77	KARNI	WEST BENGAL	1.40	46.29	4.17	0.75	0.11	3.42	0	0.11	0	0	43.97	0.14
K73	KATA RAINI	WEST BENGAL	8.34	35.5	44.6	3.9	0.1	0.5	0.0	0.1	0.2	0.0	20.9	1.0
K07	KATKI AUSH	ODISHA	1.44	24.97	21.56	2.05	0.07	3.22	0.02	0.07	0	0.02	22.85	0.68
K03	KAYA	WEST BENGAL	2.19	47.26	3.06	3.81	0.04	7.23	0.2	0.2	0	0	35.31	2.05
K05	KELAS	WEST BENGAL	5.17	44.9	34.6	2.7	0.1	2.9	0.0	0.1	0.2	0.0	44.9	0.0
K51	KELEH	WEST BENGAL	7.39	39.4	41.6	4.1	0.2	1.7	0.0	0.1	0.3	0.0	38.4	0.1
K08	KERMAL	WEST BENGAL	1.96	55.28	4.2	1.69	0.04	7.33	0	0.1	0	0	42.64	0.17
Q11	KHARAH	ODISHA	8.54	38.8	49.1	5.1	0.1	1.9	0.0	0.0	0.2	0.0	21.5	5.6
Q04	KHAS DHAN	WEST BENGAL	7.01	56.1	30.8	3.1	0.1	1.9	0.0	0.0	0.2	0.0	20.1	0.0
K60	KOLA BORA	MEGHALAYA	1.20	138.0	0.3	0.1	0.1	25.8	0.0	0.1	0.3	0.0	17.9	0.1
K24	KUMROGORH	WEST BENGAL	6.01	21.5	34.1	2.6	1.2	0.4	0.0	0.1	0.2	0.0	23.3	0.0
K10	KURAI	ODISHA	6.10	27.9	54.4	3.3	0.1	1.8	0.0	0.0	0.1	0.0	23.0	0.0
K53	KUSUMGENDA	ODISHA	2.71	24.8	4.3	0.4	0.1	0.7	0.0	0.0	0.1	0.0	18.3	0.0
L15	LAKKHAN-SAL	JHARKHAND	0.20	135.1	0.9	0.2	0.1	30.8	0.0	0.1	0.3	0.0	28.8	0.3
L18	LAKKHI CHURAH	WEST BENGAL	4.65	30.2	16.7	1.9	0.1	1.8	0.0	0.0	0.1	0.0	22.8	0.4
L39	LAKSHMI KAJAL	WEST BENGAL	0.82	18.21	36.73	1.97	0.02	2.41	0.12	0	0	0	16.97	0

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L31	LAL BAHAL	WEST BENGAL	6.14	32.4	32.3	2.8	0.1	0.8	0.0	0.1	0.2	0.0	25.2	0.0
L19	LAL GETU	WEST BENGAL	13.46	30.1	85.0	7.7	0.2	2.3	0.1	0.1	0.2	0.0	22.3	0.0
L27	LAL GOBINDABHOG	WEST BENGAL	6.38	36.2	27.4	2.4	0.1	0.5	0.0	0.0	0.2	0.0	25.3	0.0
L24	LAL KAMINI	WEST BENGAL	1.60	38.45	18.53	1.76	0.1	2.57	0	0.08	0	0.02	27.67	0.2
L23	LANGAL MUDA	WEST BENGAL	2.95	30.16	23.6	1.74	0.14	2.35	0.02	0.15	0	0.03	35.23	0.11
L16	LATA-SAL	WEST BENGAL	0.30	97.9	0.3	0.2	0.1	35.0	0.0	0.3	0.3	0.0	33.7	0.0
L38	LEDA-SAL	WEST BENGAL	11.96	24.9	65.4	7.0	0.2	1.8	0.0	0.1	0.2	0.0	28.3	5.3
L38	LEDA-SAL	WEST BENGAL	8.03	22.1	53.8	4.3	0.2	1.6	0.0	0.1	0.1	0.0	21.8	0.0
M02	MAHADI	MAHARASHTRA	2.55	25.49	28.49	1.81	0.09	2.52	0.01	0.09	0	0.01	29.16	0.22
M53	MATLA	WEST BENGAL	0.00	27.5	0.0	0.0	0.0	1.8	0.0	0.1	1.0	0.0	20.2	0.8
M24	MEGHNAD-SAL	WEST BENGAL	0.00	24.9	0.0	0.0	0.0	0.6	0.0	0.1	1.1	0.0	20.0	0.5
M56	MEHADI	ODISHA	3.01	25.0	12.4	0.6	0.1	2.5	0.0	0.1	0.2	0.0	29.1	0.7
M52	MELHITTE	NAGALAND	1.43	46.61	2.17	2.02	0.07	2.9	0	0.12	0	0	31.62	0.07
M26	MOTI	WEST BENGAL	7.91	29.2	42.9	3.9	0.1	2.2	0.0	0.0	0.2	0.0	22.0	0.0
M42	MOYNAGIRI	BANGLADESH	0.00	45.1	0.0	0.0	0.0	1.3	0.0	0.1	1.1	0.0	2.4	0.6
M51	MOYNAGURI	WEST BENGAL	7.36	34.4	42.8	4.1	0.2	1.2	0.0	0.1	0.2	0.0	28.9	0.1
M14	MURGI-SAL	WEST BENGAL	3.28	26.5	11.4	0.9	0.1	1.2	0.0	0.1	0.3	0.0	22.8	0.0
N21	NAGALAND KALO	NAGALAND	0.40	99.9	0.4	0.2	0.1	27.4	0.0	0.0	0.5	0.0	16.5	0.1
N08	NAL BAHNI	ASSAM	5.12	30.1	18.5	1.8	0.1	1.0	0.0	0.1	0.2	0.0	20.1	0.0
N18	NARAHASOI	WEST BENGAL	8.13	21.2	66.5	4.5	0.2	1.6	0.0	0.1	0.3	0.0	24.0	0.0
N02	NATA	WEST BENGAL	1.63	31.32	28.97	2.51	0.07	3.27	0.02	0.11	0	0.02	25.68	0.04
N03	NOICHI	WEST BENGAL	2.02	31.11	39.22	2.7	0.01	5.29	0.06	0.2	0	0.02	28.73	2.73
N29	NONA KHIRISH	WEST BENGAL	5.50	23.1	20.0	2.2	0.1	1.6	0.0	0.0	0.2	0.0	17.8	0.0
N22	NUINYA	BANGLADESH	0.00	20.5	0.0	0.0	0.0	0.7	0.0	0.1	0.2	0.0	19.0	0.0
P02	PAAN	WEST BENGAL	1.79	37.44	33.18	2.8	0.08	3.83	0.03	0.15	0	0.03	37.02	0.04
P17	PAJAB LAHI	ARUNACHAL PRADESH	1.45	32.92	20.65	1.81	0.07	2.25	0.02	0.13	0	0.02	21.19	0.72
P14	PAKRI	WEST BENGAL	4.12	34.3	14.3	1.3	0.0	1.7	0.0	0.0	0.2	0.0	14.2	0.0
P25	PANI BHASA	WEST BENGAL	8.00	24.4	41.6	4.3	0.2	1.3	0.0	0.1	0.3	0.0	26.7	0.1
P30	PANI KALAS	WEST BENGAL	3.88	31.9	15.2	1.2	0.1	0.5	0.0	0.0	0.2	0.0	22.3	0.0
P24	PARAMITA	WEST BENGAL	6.37	32.1	29.0	2.7	0.1	0.7	0.0	0.1	0.2	0.0	23.3	0.0
P08	PARMAI-SAL	WEST BENGAL	0.50	124.6	0.5	0.1	0.1	30.7	0.0	0.1	0.3	0.0	20.7	0.1
P35	PITTASALE	KARNATAKA	7.25	30.4	48.2	4.1	0.1	2.3	0.0	0.1	0.1	0.0	19.1	0.0
R09	RADHATILAK	WEST BENGAL	3.25	36.6	13.2	0.9	0.1	1.6	0.0	0.0	0.3	0.0	16.7	0.0
R11	RANGI	WEST BENGAL	4.62	23.4	19.1	1.8	0.1	1.4	0.0	0.1	0.3	0.0	16.6	0.0
R19	RATNACHURI	KARNATAKA	0.00	23.8	0.0	0.0	0.0	0.9	0.0	0.1	1.0	0.0	20.8	0.5
R29	REDA DHAN	WEST BENGAL	1.50	130.7	0.9	0.2	0.1	27.8	0.1	0.1	0.2	0.0	20.5	0.0
S29	SADA GETU	WEST BENGAL	0.00	26.5	0.0	0.0	0.0	2.2	0.0	0.0	1.0	0.0	22.7	0.6
S39	SADA METEH	WEST BENGAL	10.61	33.3	55.5	5.8	0.2	1.1	0.0	0.1	0.3	0.0	30.0	0.3
SH16	SHAKTI	WEST BENGAL	1.72	20.8	0.3	0.0	0.0	0.6	0.0	0.0	0.1	0.0	19.6	0.0

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SH15	SHIVAPPU KUZHIVADICHAI	TAMIL NADU	1.61	31.79	10.65	0.94	0.13	3.02	0	0.21	0	0	37	0.11
SH06	SHUA KALMA	WEST BENGAL	1.68	43.33	4.01	0.72	0.1	2.77	0	0.23	0	0	34.01	0.02
S56	SIDDHA SANNA	KARNATAKA	0.00	32.0	0.0	0.0	0.0	1.9	0.1	0.1	1.1	0.0	23.6	0.7
S45	SILKOT	NAGALAND	7.13	36.3	40.1	3.9	0.2	0.9	0.0	0.1	0.2	0.0	25.1	0.2
S15	SONAJHULI	ASSAM	0.20	110.5	0.5	0.1	0.1	25.2	0.0	0.1	0.3	0.0	18.6	0.2
S48	SOPTI	WEST BENGAL	6.67	30.3	42.6	3.4	0.1	2.1	0.1	0.1	0.1	0.0	20.2	0.0
S11	SUBASITA	WEST BENGAL	7.61	39.9	45.6	4.3	0.1	1.9	0.0	0.0	0.2	0.0	16.8	4.7
TT13	TALMUGUR	WEST BENGAL	7.08	36.4	44.6	3.5	0.1	2.2	0.0	0.1	0.1	0.0	21.5	0.0
TH02	THUBA	WEST BENGAL	6.54	32.9	35.4	3.4	0.1	1.8	0.0	0.0	0.0	0.0	23.9	0.8
T03	TIKIA PATNAI	WEST BENGAL	3.71	14.9	9.8	0.9	0.1	0.7	0.0	0.0	0.1	0.0	25.0	0.0
TT17	TIL KASTURI	CHHATTISGARH	3.57	33.0	14.2	1.1	0.1	2.0	0.0	0.1	0.1	0.0	23.6	0.1
TT01	TULSA	MAHARASHTRA	1.09	35.7	5.52	1.04	0.03	2.21	0.01	0	0	0	20.44	0.13
J02	ZEENI	MAHARASHTRA	2.64	33.4	7.9	0.5	0.1	1.4	0.0	0.0	0.4	0.0	16.0	0.0