Experiment	Nutrition	Accession	LN	SGR	SPA	SFM	S/RFM	RFM	RT	PRL
Exp 1	N+	Akita	19.5	0.192	1.60	178.3	6.1	29.9	1.98	7.61
Exp 1	N+	Alc-0	14.5	0.200	1.78	232.3	8.2	28.9	2.18	6.43
Exp 1	N+	Bay-0	16.5	0.208	1.64	190.1	7.0	27.7	1.69	6.81
Exp 1	N+	BL-1	16.0	0.213	1.73	191.0	5.7	33.6	2.13	7.16
Exp 1	N+	Blh-1	15.5	0.193	1.66	165.6	5.8	29.3	2.00	5.14
Exp 1	N+	Bur-0	18.9	0.201	1.80	222.4	7.2	31.5	2.18	8.09
Exp 1	N+	Can-0	14.3	0.209	1.74	187.3	8.9	21.7	1.55	4.63
Exp 1	N+	col-0	13.0	0.185	0.72	77.3	6.8	11.3	0.95	4.73
Exp 1	N+	Ct-I	16.8	0.203	1.46	159.1	7.6	21.5	1.47	5.53
Exp 1	N+	Cvi-0	12.4	0.177	1.32	136.8	7.7	18.2	1.21	6.64
Exp 1	N+	Edi-0	20.0	0.211	1.84	229.8	6.8	35.8	2.56	6.23
Exp 1	N+	Ge-0	17.1	0.194	1.94	230.4	6.9	34.5	2.38	7.14
Exp 1	N+	Gre-0	16.9	0.195	1.83	212.4	7.0	30.8	2.11	7.09
Exp 1	N+	Jea	15.5	0.193	1.72	185.5	6.7	28.6	1.83	7.70
Exp 1	N+	Kn-0	17.5	0.213	1.61	179.5	7.9	25.4	1.84	5.84
Exp 1	N+	ler	11.5	0.202	0.74	76.6	7.5	11.3	0.96	3.53
Exp 1	N+	Mh-1	13.9	0.198	0.93	97.8	8.3	12.5	1.06	3.41
Exp 1	N+	Mt-0	17.5	0.215	1.56	172.9	7.0	25.6	1.75	6.04
Exp 1	N+	N13	14.9	0.218	1.38	126.0	6.0	21.3	1.49	6.05
Exp 1	N+	Oy-0	18.3	0.192	1.71	182.0	6.7	28.6	2.09	6.08
Exp 1	N+	pyl-1	14.4	0.201	1.59	156.1	4.8	33.4	1.98	8.51
Exp 1	N+	sakat	12.5	0.188	1.56	189.0	7.6	25.7	2.20	4.80
Exp 1	N+	stw-0	14.4	0.176	1.20	109.6	7.3	15.4	1.62	3.93
Exp 1	N-	Akita	15.7	0.085	1.33	97.3	5.1	20.2	1.35	6.62
Exp 1	N-	Alc-0	12.1	0.048	1.70	150.2	4.5	36.5	2.40	5.88
Exp 1	N-	Bay-0	15.3	0.099	1.47	137.8	5.5	26.3	1.60	7.09
Exp 1	N-	BL-1	11.8	0.049	1.39	71.9	4.9	15.8	1.09	5.26
Exp 1	N-	Blh-1	12.4	0.079	1.42	107.4	5.0	22.6	1.52	5.25
Exp 1	N-	Bur-0	15.5	0.083	1.39	112.0	5.3	21.2	1.40	5.78
Exp 1	N-	Can-0	13.6	0.067	1.41	123.4	6.7	19.0	1.30	5.30
Exp 1	N-	col-0	10.5	0.122	0.05	37.2	7.0	6.0	0.68	3.90
Exp 1	N-	Ct-I	14.2	0.100	1.15	87.7	5.5	17.4	1.18	5.39

Experiment	Nutrition	Accession	LN	SGR	SPA	SFM	S/RFM	RFM	RT	PRL
Exp 1	N-	Cvi-0	11.5	0.094	0.51	108.8	5.8	19.3	1.09	6.69
Exp 1	N-	Edi-0	16.8	0.063	1.83	136.3	4.9	29.2	1.94	6.18
Exp 1	N-	Ge-0	14.9	0.057	2.02	150.5	5.3	28.8	1.75	5.15
Exp 1	N-	Gre-0	12.0	0.083	1.60	95.3	7.5	15.4	1.55	6.11
Exp 1	N-	Jea	14.0	0.063	1.58	138.8	4.3	34.2	2.13	6.81
Exp 1	N-	Kn-0	15.8	0.080	1.50	144.8	5.1	29.2	1.83	7.03
Exp 1	N-	ler	11.2	0.079	1.00	60.4	5.0	12.2	0.80	4.70
Exp 1	N-	Mh-1	15.3	0.096	1.12	112.9	5.5	20.7	1.41	5.23
Exp 1	N-	Mt-0	14.1	0.074	1.20	88.7	5.9	16.1	1.19	4.55
Exp 1	N-	N13	11.8	0.119	0.89	75.7	5.3	16.2	1.14	4.68
Exp 1	N-	Oy-0	13.5	0.069	1.69	77.0	6.2	15.8	1.06	4.05
Exp 1	N-	pyl-1	13.2	0.076	1.27	91.8	2.9	33.9	1.77	8.38
Exp 1	N-	sakat	11.6	0.084	1.14	123.6	5.7	22.6	2.04	5.05
Exp 1	N-	stw-0	14.2	0.075	1.21	86.8	6.0	14.7	1.27	4.50
Exp 1	N0	Akita	18.6	0.215	1.02	98.4	2.3	41.4	2.54	6.95
Exp 1	N0	Alc-0	13.9	0.225	1.50	140.3	2.3	60.9	3.64	5.96
Exp 1	N0	Bay-0	16.0	0.220	1.48	119.6	2.6	46.4	2.45	6.39
Exp 1	N0	BL-1	15.5	0.217	0.72	107.8	2.5	46.1	2.51	6.84
Exp 1	N0	Blh-1	14.2	0.203	1.21	92.0	2.1	43.2	2.61	4.78
Exp 1	N0	Bur-0	14.8	0.236	1.25	97.8	2.7	35.9	2.12	6.68
Exp 1	N0	Can-0	13.5	0.223	1.41	83.4	2.5	33.0	2.27	4.21
Exp 1	N0	col-0	11.8	0.182	-0.09	31.5	3.0	11.4	1.02	3.44
Exp 1	N0	Ct-I	15.5	0.242	0.93	94.7	2.2	44.4	2.64	7.06
Exp 1	N0	Cvi-0	10.8	0.182	1.12	74.7	3.0	27.3	1.55	3.89
Exp 1	N0	Edi-0	18.6	0.198	1.48	147.6	2.3	63.6	3.69	6.29
Exp 1	N0	Ge-0	16.4	0.221	1.56	164.6	2.7	64.7	3.52	7.74
Exp 1	N0	Gre-0	17.1	0.227	0.89	121.1	2.7	46.0	2.66	6.66
Exp 1	N0	Jea	14.3	0.191	1.28	106.1	2.2	47.8	2.76	7.00
Exp 1	N0	Kn-0	15.3	0.224	1.57	114.3	2.5	47.7	2.78	6.28
Exp 1	N0	ler	12.0	0.208	0.64	51.5	2.1	25.7	1.73	4.07
Exp 1	N0	Mh-1	15.0	0.195	1.19	75.5	2.6	29.6	1.96	4.78
Exp 1	N0	Mt-0	17.9	0.233	0.96	114.6	2.5	46.5	3.11	6.90

Experiment	Nutrition	Accession	LN	SGR	SPA	SFM	S/RFM	RFM	RT	PRL
Exp 1	N0	N13	13.8	0.227	0.59	70.8	2.3	31.5	2.08	4.69
Exp 1	N0	Oy-0	17.8	0.205	0.75	123.4	2.4	53.8	3.06	5.92
Exp 1	N0	pyl-1	13.4	0.182	1.19	82.8	2.0	41.8	1.98	7.61
Exp 1	N0	sakat	12.5	0.202	1.37	110.1	2.7	41.2	3.49	5.15
Exp 1	N0	stw-0	15.3	0.190	0.93	67.9	2.8	25.2	1.72	4.15

Experiment	Nutrition	Accession	LN	SGR	SPA	SFM	S/RFM	RFM	RT	PRL	SN%	SNO3	RNO3	SStarch	RStarch	SAA	RAA	S/RNO3	S/RAA	S/RStarch
Exp 2	N+	Akita	16.1	0.192	3.75	90.8	6.1	15.1	1.62	9.3	6.90	743.1	263.4	133	4.2	159.0	98.8	2.8	1.6	31.5
Exp 2	N+	Alc-0	13.4	0.200	6.05	158.3	6.6	24.6	2.75	9.1	7.04	864.4	244.2	197	4.8	167.9	98.9	3.5	1.7	41.4
Exp 2	N+	Bay-0	13.8	0.208	3.80	103.3	7.1	16	1.63	10.2	6.85	993.8	273.4	88	4.6	158.1	81.1	3.6	1.9	19.2
Exp 2	N+	BL-1	14.3	0.213	4.75	116.5	5.5	21.9	2.02	10.9	6.65	756.6	312.4	306	5.1	175.8	91.5	2.4	1.9	60.6
Exp 2	N+	Blh-1	13.8	0.193	5.45	129.1	5.6	24.5	2.23	11.2	6.63	876.1	343.4	254	4.7	161.5	98.6	2.6	1.6	53.6
Exp 2	N+	Bur-0	17.3	0.201	6.23	158.4	7.7	20.8	1.97	10.6	6.40	676.7	310.8	365	4.5	173.1	92.2	2.2	1.9	81.0
Exp 2	N+	Can-0	14.7	0.209	5.95	137.5	7.8	17.7	1.89	9.5	6.09	826.6	263.0	287	5.8	141.9	91.8	3.1	1.5	49.3
Exp 2	N+	col-0	14.0	0.183	3.74	90.2	6.4	15.2	1.49	10.3	6.28	730.8	264.0	163	3.8	127.3	76.0	2.8	1.7	42.6
Exp 2	N+	Ct-I	14.8	0.203	4.13	91.2	6.6	14.5	1.59	9.3	6.78	693.4	274.3	148	7.1	162.1	88.4	2.5	1.8	20.9
Exp 2	N+	Cvi-0	11.8	0.177	3.77	110.4	6.9	17.7	1.92	9.1	6.60	687.7	258.8	220	5.1	133.7	84.4	2.7	1.6	42.7
Exp 2	N+	Edi-0	20.1	0.211	8.34	195.7	7.5	27.6	3.23	8.6	6.96	869.5	292.7	172	4.6	179.8	101.6	3.0	1.8	37.2
Exp 2	N+	Ge-0	12.7	0.202	8.16	208.4	7.6	29.3	3.05	9.6	6.75	689.7	260.8	170	5.8	169.1	104.5	2.6	1.6	29.2
Exp 2	N+	Gre-0	15.4	0.195	4.65	103.7	7.6	14.8	1.59	9.5	7.00	875.4	196.8	208	4.1	156.1	77.7	4.4	2.0	50.3
Exp 2	N+	Jea	13.6	0.193	4.94	121	6.1	21.1	1.94	11.0	6.73	717.0	298.9	297	6.1	156.8	133.3	2.4	1.2	49.1
Exp 2	N+	Kn-0	15.3	0.213	3.42	92.4	6.9	14.1	1.57	9.1	6.65	671.2	428.9	230	3.2	165.6	100.3	1.6	1.7	72.3
Exp 2	N+	ler	13.9	0.192	6.33	134.5	5.9	23.9	2.43	10.0	5.66	794.4	284.9	225	3.4	216.8	99.1	2.8	2.2	66.5
Exp 2	N+	Mh-1	16.4	0.198	8.17	139.6	7.4	20.3	1.84	11.3	6.75	845.2	267.5	219	3.5	137.1	88.9	3.2	1.5	62.1
Exp 2	N+	Mt-0	15.0	0.215	4.39	105.6	9.9	12.8	1.39	9.0	6.69	694.9	230.4	198	4.4	156.4	92.0	3.0	1.7	45.5
Exp 2	N+	N13	11.9	0.218	3.75	89.9	6.1	15.6	1.92	8.1	6.61	791.1	446.8	176	3.8	174.9	124.7	1.8	1.4	46.3
Exp 2	N+	Oy-0	16.0	0.192	4.76	109.9	5.9	18.7	1.82	10.4	6.46	659.2	285.9	175	3.2	144.2	85.2	2.3	1.7	55.2
Exp 2	N+	pyl-1	11.3	0.185	5.52	102.2	3.9	27.3	2.30	12.1	6.56	653.0	381.7	400	5.3	118.9	101.3	1.7	1.2	75.1
Exp 2	N+	sakat	16.0	0.194	7.13	155.4	6.6	24.1	2.17	11.1	6.48	847.6	318.2	230	4.4	174.7	92.3	2.7	1.9	51.9
Exp 2	N+	stw-0	15.7	0.201	5.62	117.9	7.5	16.5	2.00	8.3	6.75	691.5	299.7	154	2.7	128.4	77.1	2.3	1.7	57.6
Exp 2	N-	Akita	15.0	0.161	2.54	60.3	9.3	6.7	0.77	8.1	6.75	607.4	111.4	177	8.3	119.0	77.9	5.5	1.5	21.3
Exp 2	N-	Alc-0	9.7	0.179	3.63	90.6	8.3	11.9	1.43	9.4	6.62	700.1	174.9	399	7.5	111.3	72.9	4.0	1.5	53.6
Exp 2	N-	Bay-0	14.5	0.170	3.47	94	9.8	10.2	0.99	8.8	6.84	780.7	167.0	172	6.6	139.5	75.9	4.7	1.8	26.2
Exp 2	N-	BL-1	14.5	0.175	4.60	119.9	8.2	15.5	1.44	9.5	6.53	693.4	188.0	432	7.3	133.7	79.9	3.7	1.7	59.0
Exp 2	N-	Blh-1	13.5	0.146	4.63	112.8	8.6	13	1.27	9.4	6.75	733.0	235.0	396	7.8	114.0	87.6	3.1	1.3	51.0
Exp 2	N-	Bur-0	14.8	0.166	5.32	151.5	10.7	14.5	1.46	9.7	6.27	517.0	195.6	550	8.3	124.6	90.0	2.6	1.4	66.5
Exp 2	N-	Can-0	11.8	0.186	4.96	114.3	13.1	8.8	0.96	7.9	6.37	608.6	113.3	538	8.2	103.1	69.7	5.4	1.5	65.8
Exp 2	N-	col-0	13.5	0.155	2.79	79.8	10.0	8.6	0.86	8.4	6.50	590.6	136.4	221	7.6	109.2	80.2	4.3	1.4	28.9
Exp 2	N-	Ct-I	13.4	0.172	3.30	84.9	11.2	7.9	0.83	8.6	6.78	584.2	132.7	199	8.7	123.0	66.5	4.4	1.9	23.0
Exp 2	N-	Cvi-0	11.8	0.163	4.09	136.8	11.3	12.5	1.25	8.2	6.30	670.3	137.9	261	7.3	106.5	82.8	4.9	1.3	35.7
Exp 2	N-	Edi-0	17.6	0.186	6.66	186.4	10.6	17.9	1.93	9.7	6.80	710.9	136.6	253	8.3	114.6	80.9	5.2	1.4	30.4
Exp 2	N-	Ge-0	12.6	0.133	6.89	185.7	11.1	16.9	1.88	9.1	6.00	616.7	137.5	229	6.2	128.8	89.8	4.5	1.4	37.2
Exp 2	N-	Gre-0	13.5	0.180	2.55	85.9	12.0	7.4	0.84	9.2	6.88	717.6	106.1	287	4.0	120.1	45.3	6.8	2.7	72.5
Exp 2	N-	Jea	13.0	0.144	3.43	91.2	10.2	9.1	0.78	10.5	6.70	685.4	110.4	813	9.9	136.4	61.4	6.2	2.2	82.1
Exp 2	N-	Kn-0	14.7	0.153	3.54	96.9	12.2	8.2	0.85	8.0	6.68	592.6	141.4	460	7.7	119.2	81.9	4.2	1.5	59.5
Exp 2	N-	ler	13.4	0.154	5.33	119.7	8.3	27.8	1.32	9.7	6.86	592.7	176.0	251	8.8	203.5	96.2	3.4	2.1	28.5
Exp 2	N-	Mh-1	15.9	0.150	6.90	121.7	11.6	10.7	1.11	9.9	6.77	692.1	142.3	359	6.3	105.4	77.2	4.9	1.4	57.2
Exp 2	N-	Mt-0	14.5	0.147	3.71	100.2	11.8	8.5	0.87	8.8	6.66	655.2	161.8	208	6.7	117.8	89.5	4.0	1.3	31.0
Exp 2	N-	N13	13.0	0.172	3.26	76.8	8.7	8.7	1.22	7.9	6.79	582.7	153.6	227	5.6	132.1	78.6	3.8	1.7	40.3
Exp 2	N-	Oy-0	15.5	0.169	4.04	100.9	9.4	11.3	1.14	9.6	6.45	572.4	171.6	223	5.6	121.3	98.5	3.3	1.2	39.6
Exp 2	N-	pyl-1	13.0	0.153	4.14	90.9	7.9	12.1	0.90	11.7	6.40	599.8	120.1	271	5.4	110.3	71.1	5.0	1.6	49.9
Exp 2	N-	sakat	14.1	0.152	4.02	139.2	10.7	13.5	1.18	8.4	6.67	788.7	175.4	535	8.6	126.6	75.5	4.5	1.7	62.5
Exp 2	N-	stw-0	14.9	0.156	4.66	115	11.7	10.1	1.20	6.7	6.36	591.8	169.9	267	6.0	115.2	69.0	3.5	1.7	44.8
Exp 2	N0	Akita	16.4	0.172	3.86	63	3.5	18.1	2.29	8.9	3.57	25.9	37.9	641	7.6	59.0	136.9	0.7	0.4	84.0
Exp 2	N0	Alc-0	12.9	0.095	4.23	107.2	3.3	31.1	3.30	8.3	3.43	373.0	67.1	456	9.1	52.5	138.6	5.6	0.4	50.1
Exp 2	N0	Bay-0	14.1	0.121	3.29	64.1	2.9	22	2.50	10.3	3.59	29.2	38.7	979	6.6	41.9	110.4	0.8	0.4	148.0
Exp 2	N0	BL-1	15.0	0.118	4.18	80.4	2.7	30	3.19	11.0	3.44	30.0	37.2	1606	9.7	39.3	125.8	0.8	0.3	165.9
Exp 2	N0	Blh-1	14.4	0.148	4.46	70.4	2.9	25.4	2.75	10.3	3.50	38.7	33.1	1012	8.8	68.9	95.3	1.2	0.7	114.6
Exp 2	N0	Bur-0	16.6	0.090	4.81	102.5	4.2	25.8	2.66	9.9	3.33	25.0	25.3	1391	7.6	53.5	180.9	1.0	0.3	183.9
Exp 2	N0	Can-0	12.0	0.068	3.83	76.9	5.4	14	1.76	9.3	3.18	20.9	17.7	832	7.3	54.0	72.8	1.2	0.7	114.7
Exp 2	N0	col-0	12.4	0.189	3.16	47.4	3.0	15.9	1.91	10.1	3.61	33.0	35.6	696	5.9	43.5	103.0	0.9	0.4	117.6
Exp 2	N0	Ct-I	14.3	0.123	3.60	61	3.4	18.3	2.17	9.7	3.42	32.0	28.1	1429	10.0	46.8	110.1	1.1	0.4	143.0
Exp 2	N0	Cvi-0	11.3	0.166	3.94	70.7	4.0	17.3	2.11	9.9	3.58	43.2	35.5	821	7.9	66.5	155.4	1.2	0.4	104.2
Exp 2	N0	Edi-0	18.5	0.118	5.70	97.6	2.7	45.8	4.04	9.3	3.46	51.3	45.2	1355	8.9	124.6	134.8	1.1	0.9	152.0
Exp 2	N0	Ge-0	12.5	0.099	6.48	163.7	5.8	28	3.07	8.9	3.25	101.5	36.1	920	9.0	53.5	142.0	1.9	0.4	144.5
Exp 2	N0	Gre-0	14.0	0.271	4.97	57.8	4.1	13.6	1.47	9.1	4.54	101.3	53.8	648	5.3	53.4	102.0	1.9	0.5	121.8
Exp 2	N0	Jea	13.0	0.113	2.90	58.5	3.0	20.6	1.95	11.6	3.98	72.1	60.3	543	8.2	47.4	106.4	1.2	0.4	65.9
Exp 2	N0	Kn-0	15.0	0.089	2.48	49.9	2.7	18.4	2.32	9.8	3.47	33.3	34.2	1672	7.2	39.1	140.7	1.0	0.3	233.1
Exp 2	N0	ler	13.1	0.099	5.02	94.5	2.5	33.8	2.64	11.0	3.65	44.7	41.4	1343	7.2	157.2	139.4	1.1	1.1	187.7

Experiment	Nutrition	Accession	LN	SGR	SPA	SFM	S/RFM	RFM	RT	PRL	SN%	SNO3	RNO3	SStarch	RStarch	SAA	RAA	S/RNO3	S/RAA	S/RStarch
Exp 2	N0	Mh-1	16.2	0.111	6.44	109.1	4.0	26.3	2.00	11.7	4.42	45.1	36.2	635	9.4	39.2	108.2	1.2	0.4	67.2
Exp 2	N0	Mt-0	15.4	0.099	3.79	73.2	4.1	18.5	2.11	9.8	3.47	20.1	39.9	899	8.9	36.9	117.8	0.5	0.3	101.0
Exp 2	N0	N13	12.3	0.134	2.86	54.5	3.4	15.8	1.99	7.1	3.49	31.8	30.3	1567	11.1	59.6	94.9	1.0	0.6	141.1
Exp 2	N0	Oy-0	16.3	0.145	3.93	63.1	2.9	22.5	2.32	9.9	3.53	27.8	44.0	1430	7.4	44.5	170.1	0.6	0.3	192.3
Exp 2	N0	pyl-1	13.0	0.282	5.47	67.2	3.1	22	1.90	13.1	3.31	40.2	48.1	898	6.9	44.6	104.4	0.8	0.4	129.6
Exp 2	N0	sakat	14.4	0.107	4.94	89.2	3.5	25.8	3.10	11.9	3.47	36.9	53.2	1299	7.2	51.6	124.0	1.0	0.4	127.7
Exp 2	N0	stw-0	15.0	0.119	3.64	65.4	4.3	15.4	2.29	8.5	4.40	27.3	27.1	386	7.5	44.6	157.2	1.0	0.3	51.7

Supplemental Data2

Control Condition N+

Pearson 's correlation matrix

Traits	LN	SGR	SPA	SFM	SNO3	SAA	S/RFM	RFM	RT	PRL	SN%	SStarch	RStarch	RNO3	RAA	S/RNO3	S/RAA	S/RStarch
LN	1	ns	0.39	ns	ns	ns	0.42	ns	ns	ns	ns	ns	ns	ns	ns	ns	0.38	ns
SGR	ns	1	ns	ns	ns	0.38	0.43	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
SPA	0.39	ns	1	0.89	ns	ns	ns	0.76	0.75	ns	ns	ns	ns	ns	ns	ns	ns	ns
SFM	ns	ns	0.89	1	ns	0.35	ns	0.78	0.84	-0.38	ns	ns	ns	ns	ns	ns	ns	ns
SNO3	ns	ns	ns	ns	1	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	0.67	0.36	ns
SAA	ns	0.38	ns	0.35	ns	1	ns	ns	0.37	ns	ns	ns	ns	ns	0.36	ns	0.58	ns
S/RFM	0.42	0.43	ns	ns	ns	ns	1	-0.36	ns	ns	ns	ns	ns	-0.48	ns	0.42	ns	ns
RFM	ns	ns	0.76	0.78	ns	ns	-0.36	1	0.90	ns	ns	0.38	ns	ns	ns	ns	ns	ns
RT	ns	ns	0.75	0.84	ns	0.37	ns	0.90	1	ns	ns	ns	ns	ns	ns	ns	ns	ns
PRL	ns	ns	ns	ns	ns	ns	ns	ns	ns	1	ns	ns	0.40	ns	ns	ns	ns	ns
SN%	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	1	ns	ns	ns	ns	ns	ns	-0.43
SStarch	ns	ns	ns	ns	ns	ns	ns	0.38	ns	ns	ns	1	ns	ns	ns	-0.37	ns	0.76
RStarch	ns	ns	ns	ns	ns	ns	ns	ns	ns	0.40	ns	ns	1	ns	ns	ns	ns	-0.42
RNO3	ns	ns	ns	ns	ns	ns	-0.48	ns	ns	ns	ns	ns	ns	1	0.50	-0.82	-0.37	0.42
RAA	ns	ns	ns	ns	ns	0.36	ns	ns	ns	ns	ns	ns	ns	0.50	1	-0.42	-0.54	ns
S/RNO3	ns	ns	ns	ns	0.67	ns	0.42	ns	ns	ns	ns	-0.37	ns	-0.82	-0.42	1	0.45	-0.44
S/RAA	0.38	ns	ns	ns	0.36	0.58	ns	ns	ns	ns	ns	ns	ns	-0.37	-0.54	0.45	1	ns
S/RStarch	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-0.43	0.76	-0.42	0.42	ns	-0.44	ns	1

Supplemental Data2

N limited condition N-

Pearson 's correlation matrix

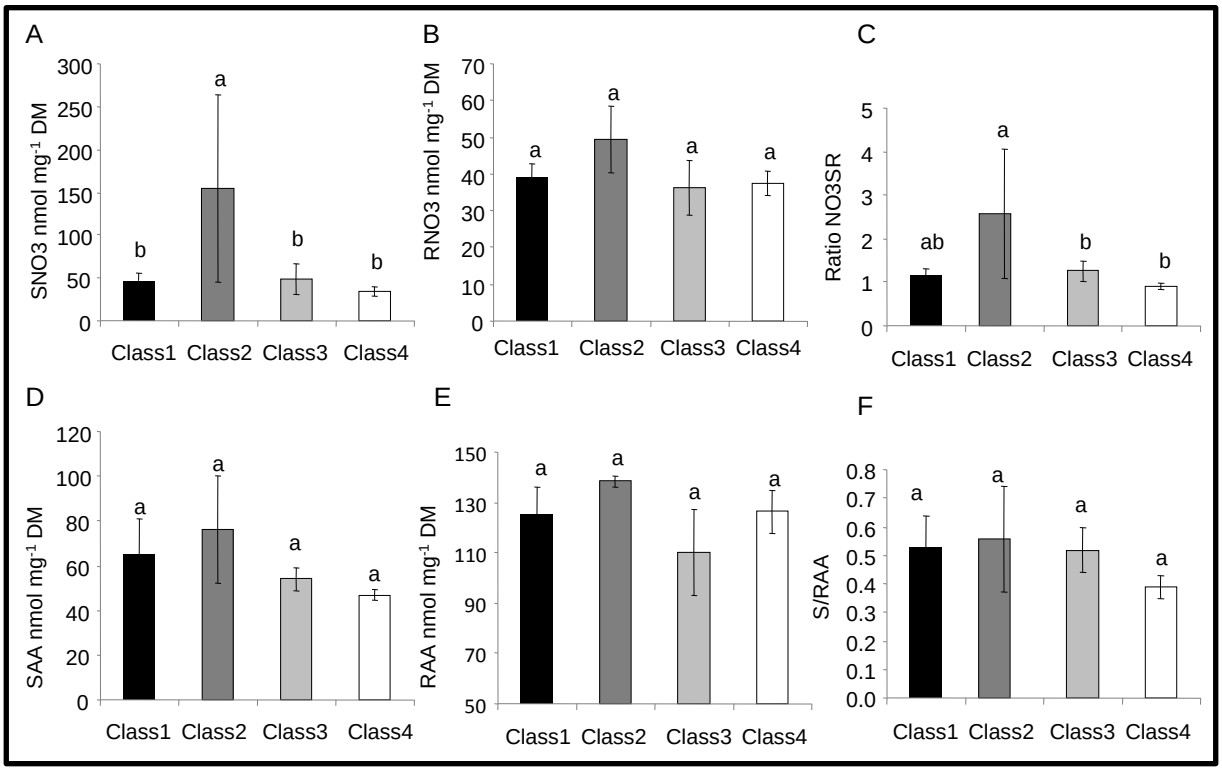
Traits	LN	SGR	SPA	SFM	SNO3	SAA	S/RFM	RFM	RT	PRL	SN%	SStarch	RStarch	RNO3	RAA	S/RNO3	S/RAA	S/RStarch
LN	1	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
SGR	ns	1	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
SPA	ns	ns	1	0.84	ns	ns	ns	0.61	0.74	ns	ns	ns	ns	ns	0.40	ns	ns	ns
SFM	ns	ns	0.84	1	ns	ns	ns	0.61	0.84	ns	-0.45	ns	ns	ns	0.36	ns	ns	ns
SNO3	ns	ns	ns	ns	1	ns	ns	ns	ns	ns	0.42	ns	ns	ns	ns	0.36	ns	ns
SAA	ns	ns	ns	ns	ns	1	-0.38	0.68	ns	ns	ns	ns	ns	ns	ns	ns	0.49	ns
S/RFM	ns	ns	ns	ns	ns	-0.38	1	-0.37	ns	-0.46	ns	ns	ns	-0.40	ns	ns	ns	ns
RFM	ns	ns	0.61	0.61	ns	0.68	-0.37	1	0.67	ns	ns	ns	ns	0.40	0.52	-0.38	ns	ns
RT	ns	ns	0.74	0.84	ns	ns	ns	0.67	1	ns	ns	ns	ns	0.40	0.43	-0.36	ns	ns
PRL	ns	ns	ns	ns	ns	ns	-0.46	ns	ns	1	ns	ns	ns	ns	ns	ns	ns	ns
SN%	ns	ns	ns	-0.45	0.42	ns	ns	ns	ns	ns	1	ns	ns	ns	ns	ns	0.47	ns
SStarch	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	1	0.50	ns	ns	ns	0.17	0.86
RStarch	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	0.50	1	ns	ns	ns	ns	ns
RNO3	ns	ns	ns	ns	ns	ns	-0.40	0.40	0.40	ns	ns	ns	ns	1	0.56	-0.84	ns	ns
RAA	ns	ns	0.40	0.36	ns	ns	ns	0.52	0.43	ns	ns	ns	ns	0.56	1	-0.73	-0.67	-0.43
S/RNO3	ns	ns	ns	ns	0.36	ns	ns	-0.38	-0.36	ns	ns	ns	ns	-0.84	-0.73	1	0.50	ns
S/RAA	ns	ns	ns	ns	ns	0.49	ns	ns	ns	ns	0.47	ns	ns	ns	-0.67	0.50	1	ns
S/RStarch	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	0.86	ns	ns	-0.43	ns	ns	1

Supplemental Data2

N starved condition N0

Pearson 's correlation matrix

Traits	LN	SGR	SPA	SFM	SNO3	SAA	S/RFM	RFM	RT	PRL	SN%	RNO3	RAA	SStarch	RStarch	S/RNO3	S/RAA	S/RStarch
LN	1	ns	ns	ns	ns	ns	ns	ns	0.37	ns	ns	ns	0.42	ns	ns	ns	ns	ns
SGR	ns	1	ns	-0.38	ns	ns	ns	ns	-0.44	ns	ns	ns	ns	ns	-0.43	ns	ns	ns
SPA	ns	ns	1	0.77	ns	ns	ns	0.58	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
SFM	ns	-0.38	0.77	1	0.36	ns	0.49	0.65	0.58	ns	ns	ns	ns	ns	ns	0.38	ns	ns
SNO3	ns	ns	ns	0.36	1	ns	ns	ns	ns	ns	ns	0.69	ns	ns	ns	0.99	ns	-0.37
SAA	ns	ns	ns	ns	ns	1	ns	0.55	0.37	ns	ns	ns	ns	ns	ns	ns	0.89	ns
S/RFM	ns	ns	ns	0.49	ns	ns	1	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
RFM	ns	ns	0.58	0.65	ns	0.55	ns	1	0.84	ns	ns	0.37	ns	ns	ns	ns	ns	ns
RT	0.37	-0.44	ns	0.58	ns	0.37	ns	0.84	1	ns	-0.39	ns	0.41	ns	ns	ns	ns	ns
PRL	ns	ns	ns	ns	ns	ns	ns	ns	ns	1	ns	ns	ns	ns	ns	ns	ns	ns
SN%	ns	ns	ns	ns	ns	ns	ns	ns	-0.39	ns	1	ns	ns	-0.52	ns	ns	ns	-0.44
RNO3	ns	ns	ns	ns	0.69	ns	ns	0.37	ns	ns	ns	1	ns	ns	ns	0.58	ns	ns
RAA	0.42	ns	ns	ns	ns	ns	ns	ns	0.41	ns	ns	ns	1	ns	ns	ns	ns	ns
SStarch	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-0.52	ns	ns	1	ns	ns	ns	0.89
RStarch	ns	-0.43	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	1	ns	ns	ns
S/RNO3	ns	ns	ns	0.38	0.99	0.01	ns	ns	ns	ns	ns	0.58	ns	ns	ns	1	ns	-0.37
S/RAA	ns	ns	ns	ns	ns	0.89	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	1	ns
S/RStarch	ns	ns	ns	ns	-0.37	ns	ns	ns	ns	ns	-0.44	ns	ns	0.89	ns	-0.37	ns	1



Supplemental data 3: N-related metabolite analyses for the 4 classes in starved N0 condition. Bars show averages of all accessions in a class. (A) Nitrate content in shoot. (B) Nitrate content in root. (C) Shoot to root ratio of nitrate content. (D) Free amino acids content in shoot. (E) Free amino acid content in root. (F) Shoot to root ratio of free amino acid content. Different letters indicate values significantly different at $p<0.05$.