

Table S1. BLAST hits of the significant SNPs detected in this study.

Trait		QTL Name	SNP	Chr	Pos (cM)	Candidate gene and function	Sequence similarity (%)
Seedling vigor	Shoot length (cm)	<i>QSLeV.nri-1A</i>	IWB43660	1A	29	E3 ubiquitin-protein ligase HERC2-like (LOC109747999), mRNA, plant development	96.1
		<i>QSLeV.nri-2B</i>	IWB36210	2B	163	Probable magnesium transporter NIPA4 (LOC109745924), mRNA	96.9
		<i>QSLeV.nri-4B.1</i>	IWB31302	4B	37	Aminopeptidase M1-B, vegetative and reproductive development	97.0
			IWB34257	4B	37	None	
			IWB34260	4B	37	None	
			IWB36235	4B	37	Aminopeptidase M1-B (LOC109766709), mRNA	95.2
			IWB6060	4B	37	Aminopeptidase M1-B, vegetative and reproductive development	99.0
			IWB6168	4B	37	Aminopeptidase M1-B, vegetative and reproductive development	95.1
			IWB72103	4B	37	Aminopeptidase M1-B, vegetative and reproductive development	95.8
		<i>QSLeV.nri-4B.2</i>	IWB56078	4B	55	Microsomal glutathione S-transferase 3-like (LOC109759267), mRNA	92.2
			IWB7508	4B	55	DEAD-box ATP-dependent RNA helicase 21 (LOC109780750), transcript variant X1, mRNA	95.9
			IWB35611	4B	57	Serine/threonine-protein kinase STE20-like (LOC109773213), mRNA	96.5
			IWB8217	4B	60	4-hydroxy-3-methylbut-2-enyl diphosphate reductase, chloroplastic (LOC109742400), mRNA, chloroplast development	94.1
		<i>QSLeV.nri-5A</i>	IWB43526	5A	86	None	
		<i>QSLeV.nri-7A</i>	IWB9062	7A	136	None	
	Number of shoots	<i>QSNeV.nri-2A</i>	IWB28627	2A	143	G-type lectin S-receptor-like serine/threonine-protein kinase B120 (LOC109753569), transcript variant X4, mRNA	95.0
		<i>QSNeV.nri-5A</i>	IWA2445	5A	53	F-box protein CPR30-like (LOC109755015), mRNA	98.0
		<i>QSNeV.nri-7A</i>	IWB74123	7A	43	None	
			IWB8896	7A	44	None	
	Shoot dry weight (g)	<i>QSDWeV.nri-6A</i>	IWB50	6A	141	None	
		<i>QSDWeV.nri-7A</i>	IWB42636	7A	228	None	
		<i>QSDWeV.nri-7D</i>	IWB21364	7D	138	None	
Regrowth vigor	Shoot length (cm)	<i>QSLrV.nri-2A</i>	IWB70425	2A	126	None	
		<i>QSLrV.nri-2B</i>	IWB36210	2B	163	Probable magnesium transporter NIPA4 (LOC109745924), mRNA	96.9
		<i>QSLrV.nri-4B</i>	IWB7508	4B	55	DEAD-box ATP-dependent RNA helicase 21 (LOC109780750), transcript variant X1, mRNA	95.9
			IWB35611	4B	57	Serine/threonine-protein kinase STE20-like (LOC109773213), mRNA	96.5
			IWB27677	4B	58	Protein ZINC INDUCED FACILITATOR-LIKE 1-like (LOC109759010), mRNA	91.8
			IWB12856	4B	60	Inositol-tetrakisphosphate 1-kinase 3 (LOC109732807), transcript variant X2, mRNA	94.8
			IWB8217	4B	60	4-hydroxy-3-methylbut-2-enyl diphosphate reductase, chloroplastic (LOC109742400), mRNA	94.1
			IWB22991	4B	63	Calcium-transporting ATPase 2, plasma membrane-type-like (LOC109746181), transcript variant X3, mRNA	95.1
			IWA8564	4B	64	Clathrin heavy chain 1 (LOC109737496), transcript variant X2, mRNA	95.2

		IWB62686	4B	64	Clathrin heavy chain 1 (LOC109737496), transcript variant X2, mRNA	95.2
		IWB60367	4B	64	ABC transporter E family member 2 (LOC109771174), mRNA	96.1
		IWB34983	4B	64	Protein WVD2-like 4 (LOC109769339), mRNA	99.0
		IWB44415	4B	64	Protein WVD2-like 4 (LOC109769339), mRNA	99.0
		IWB53540	4B	64	putative GTP diphosphokinase RSH1, chloroplastic (LOC109740650), mRNA	97.0
		IWB43701	4B	64	Protein WVD2-like 4 (LOC109769339), mRNA	99.0
		IWB52927	4B	64	None	
	<i>QSLrV.nri-5A</i>	IWB38719	5A	89	None	
	<i>QSLrV.nri-6B.1</i>	IWB9950	6B	66	None	
		IWB2837	6B	67	None	
	<i>QSLrV.nri-6B.2</i>	IWB59306	6B	114	None	
	<i>QSLrV.nri-7B</i>	IWB8019	7B	54	None	
		IWB66896	7B	58	None	
Number of shoots	<i>QSNrV.nri-4B</i>	IWB27735	4B	105	F-box protein CPR30-like (LOC109755015), mRNA	98.0
	<i>QSNrV.nri-6A</i>	IWB71326	6A	141	G-type lectin S-receptor-like serine/threonine-protein kinase B120 (LOC109753569), transcript variant X4, mRNA	95.2
		IWB27178	6A	141	None	
	<i>QSNrV.nri-7B</i>	IWA4802	7B	134	NF-X1-type zinc finger protein NFXL1-like (LOC109735365), transcript variant X2, mRNA	99.0
		IWB2166	7B	134	None	
Shoot dry weight (g)	<i>QSDWrV.nri-1B</i>	IWB66973	1B	118	Uncharacterized LOC109782568 (LOC109782568), mRNA	89.6
		IWB72142	1B	118	Uncharacterized LOC109782570 (LOC109782570), mRNA	96.1
		IWB12093	1B	118	Uncharacterized LOC109766637 (LOC109766637), mRNA	93.1
		IWB12399	1B	118	Uncharacterized LOC109782568 (LOC109782568), mRNA	95.1
		IWB1725	1B	118	Uncharacterized LOC109782568 (LOC109782568), mRNA	95.9
		IWB29151	1B	118	Uncharacterized LOC109782568 (LOC109782568), mRNA	95.1
		IWB63739	1B	118	Uncharacterized LOC109766637 (LOC109766637), mRNA	97.1
		IWB29150	1B	118	mRNA for predicted protein, complete cds, clone: NIASHV1015A07	91.7
		IWB36563	1B	118	Uncharacterized LOC109782568 (LOC109782568), mRNA	97.1
	<i>QSDWrV.nri-2B</i>	IWB4865	2B	134	Ubiquinol oxidase 4, chloroplastic/chromoplastic (LOC109747192), mRNA	95.1
	<i>QSDWrV.nri-4A</i>	IWA5968	4A	109	Dormancy-associated protein homolog 3-like (LOC109777200), transcript variant X1, mRNA	81.9
	<i>QSDWrV.nri-4B</i>	IWB24289	4B	78	None	
	<i>QSDWrV.nri-6A</i>	IWB12052	6A	26	None	
	<i>QSDWrV.nri-7A</i>	IWB42636	7A	228	None	