

Supplemental table S1. Overview of the experiments, treatments, and plant material used. Genotypes were classified as ‘reduced CCFN’ ≤ 10 cell files and ‘many CCFN’ ≥ 13 cell files.

Experiment ID	Environment	Treatment	Group by phenotype	RIL	CCFN \pm SD
GH2	Greenhouse	WW-WS	Many CCFN	Mo146	14 \pm 1.4
			Many CCFN	Mo263	14 \pm 0.6
			Many CCFN	Mo345	13 \pm 0
			Reduced CCFN	Mo048	10 \pm 0.4
			Reduced CCFN	Mo178	9 \pm 0.9
			Reduced CCFN	Mo277	9 \pm 0.6
GH3	Greenhouse	WW-WS	Many CCFN	Mo129	13 \pm 0.9
			Many CCFN	Mo181	14 \pm 0.8
			Many CCFN	Mo284	14 \pm 1
			Reduced CCFN	Mo277	9 \pm 1
			Reduced CCFN	Mo317	9 \pm 0.8
			Reduced CCFN	Mo365	8 \pm 0.4
PA2011	Field, Rainout shelter	WW-WS	Many CCFN	Mo129	14 \pm 1.1
			Many CCFN	Mo132	15 \pm 0.8
			Many CCFN	Mo181	14 \pm 0.8
			Reduced CCFN	Mo233	9 \pm 0.5
			Reduced CCFN	Mo317	9 \pm 1.4
			Reduced CCFN	Mo365	9 \pm 0.7
PA2012	Field, rainout shelter	WW-WS	Many CCFN	Mo146	14 \pm 0.5
			Many CCFN	Mo263	14 \pm 0.6
			Many CCFN	Mo345	14 \pm 0.5
			Reduced CCFN	Mo048	9 \pm 1.2
			Reduced CCFN	Mo178	9 \pm 0.6
			Reduced CCFN	Mo277	9 \pm 1
MW2012-2	Field-Bunda, Chitala, MW	WW-WS	Many CCFN	46C2W	15 \pm 0.9
			Many CCFN	AR239-2	15 \pm 0.5
			Many CCFN	AR267	15 \pm 0.9
			Many CCFN	AR424(5012)	15 \pm 1.2
			Many CCFN	AR716	14 \pm 0.9
			Many CCFN	AR858	14 \pm 1.3
			Many CCFN	CML199	15 \pm 0.9
			Many CCFN	CML322	15 \pm 0.5
			Many CCFN	CML377	14 \pm 0.7
			Many CCFN	E21	15 \pm 0.9
			Many CCFN	M70-29-2	15 \pm 0.9
			Many CCFN	M70-29-3	15 \pm 1
			Many CCFN	M73-18	15 \pm 1.2
			Many CCFN	Mkangala	12 \pm 1.9
			Many CCFN	SC513	12 \pm 2.1
			Many CCFN	SW18	12 \pm 2.9
			Many CCFN	SW19	14 \pm 0.5
			Reduced CCFN	AR403-3	10 \pm 0.9
			Reduced CCFN	AR660	10 \pm 3.2
			Reduced CCFN	CML196	10 \pm 0.9
Reduced CCFN	CML247	11 \pm 0.8			
Reduced CCFN	CML321	10 \pm 0.9			
Reduced CCFN	CML339	10 \pm 1.1			
Reduced CCFN	CML344	10 \pm 0.9			
Reduced CCFN	CML373	10 \pm 1.1			
Reduced CCFN	CML442	11 \pm 0.9			
Reduced CCFN	CML511	11 \pm 0.7			

Reduced CCFN	CZL99011	11±1.8
Reduced CCFN	M70-4-4	10±0.9
Reduced CCFN	M70-5-2	11±0.9
Reduced CCFN	M70-6-2	10±0.9
Reduced CCFN	M70-9-1	10±1.1
Reduced CCFN	MANICA-4	10±0.7
Reduced CCFN	MAT273-4-2-1	10±0.9
Reduced CCFN	SC403	11±0.5
Reduced CCFN	ZM523	10±0.5
