

Supplimentary table S1: Pre commercial entries tested over 2015-2017 under heat stress environments

Entry	Code	Pedigree	Year of testing
1	ZH141592	(CL-RCY016x(CML165xCLQ-6203)-B-54-1-1-BB)-B-20-2-BB-1-B-###/CA00130-B-###	2015-2017
2	ZH15421	SO4YLWL-172-B-1-1-B-1-B*6/P502c1#-771-2-2-3-B-1-1x(CML176)F2-1-1-2-3-B*6-##	2015-2017
3	CAH153	WLCY2-7-1-2-1-5-B-2-3-3-1-1-B-##-B-#/CML451-BBB	2015-2017
4	ZH111686	WLS-F238-2-2-1-B-1-BB/CML451-BB	2015-2016
5	CAH1719	SL-7,1-2-1-2-1-3-1-1-3/CML451-BB	2015-2016
6	ZH141593	G18SeqC5F19-1-2-1-2-1-BB/(Pop61C1QPMTEYF-40-1-1-1-2-B-1/(CML161x(CML451)-B-23-1-B*4-1)-B-5-B*5	2015-2016
7	VH123050	CML452=Ac8328BNC6-166-1-1-1-B*13-##-B-#-B/CML451-BB	2015-2016
8	ZH15422	SO4YLWL-172-B-1-1-B-1-B*6/CLQ-RCWQ50-B*10-#	2015-2017
9	ZH137413	CML486=P45c8-76-1-2-1-2-B*13/[GQL5/[GQL5/CML202]F2-3sx]-11-4-1-2-BB-1-BBB	2016-2017
10	VH12334	DTPYC9-F148-2-2-1-2-1-2-1-BBB/CML451-B*4	2015
11	ZH14794	(CML165xCL-02839)-B-22-1-1-BB-1-B*5/CA03139-BBB-2-BBB	2015
12	VH112901	CA14709-4-7-1-3-BBB/CML451-BBB	2015
13	VH112880	(CA14502/CA14509)-F2-31-1-B*4/CML451-BBB	2015
14	CAH1516	DTPWC9-F55-2-1-1-2-3-1-2-B*4/CML451-B*5	2015
15	CAH1433	(DT/LN/EM-46-3-1x(CML311-2-1-3))-B-F191-1-1-1-B1-B/CL02450-BBB	2015
16	VH112887	(CML474/S92145-2EV-7-3-B*5)-F2-25-1-B*5/CML451-BBB	2015
17	VH123001	WLS-F287-1-3-1-B-1-B*5/CML451-B*5	2015
18	CAH181	(CA14517/P145C4MH7-1-B-1-1-B-1-1-B*9)/CML451	2015
19	CAH1435	(DT/LN/EM-46-3-1x(CML311-2-1-3))-B-F239-1-1-1-B*4/CL02450-BBB	2015
20	CAH1449	CA00310/AMATLCOHS71-1-1-2-1-1-1-B*13/CL02450-BB	2015
21	ZH15419	SO4YLWL-172-B-1-1-B-1-B*6/CLQ-RCYQ12-B-1-B*6-#	2016
22	ZH169	WLCY2-7-1-2-1-5-B-2-3-3-1-1-B-##/(CML165xCL-02839)-B-22-1-1-BB-1-B*5-##	2016
23	CAH1432	POOL16BNSEQC3F22x1-3-2-2-2-B*5/CML451-B*4	2016
24	ZH137275	[CML312/CML445/[TUXPSEQ]C1F2/P49-SR]F2-45-3-2-1-BBB]-1-2-1-1-2-B*4/CML451-BB	2016
25	ZH138061	DTPWC9-F67-2-2-1-B*5-#/CML451-BB	2016
26	ZH15374	(POOL16BNSEQC3F22x1-3-2-2-2-BBB/CL02450-BB)-B-8-BBB/CML470	2016
27	ZH15405	LaPostaSeqC7-F71-1-2-1-2-B*5-##-B/CLQ-RCYQ12-B-1-B*6-#	2016
28	CAH1715	CA00130-B-##-B-#/CL-07306=P73TLC3#-74-2-6-1-5-##-BB-#	2016
29	CAH1723	CLRCY044-B*6-##/CL02450-BB	2016
30	VH12279	CLQ-RCYQ12-B-1-B*4/CL02450-BB	2016
31	ZH141199	F-252-1-1-1-2-1-1-1-#/CML470	2016
32	ZH15298	(CML337-B*4/CL02450-BB)-B-18-B-B2-B/CML472	2016
33	ZH15439	CA00130-B/Pop61C1QPMTEYF-40-1-1-1-1-B-2-B*4	2016
34	ZH1615	CLQRCYQ59-B*6-##/CML451-BB	2016
35	ZH15440	CA00130-B/CL-04374=P43Cameroon-4-1-1-1-1-3-3-B*11	2016
36	CAH1717	S87P69Q(SIYF)131-2-2-1-B*5/WLCY2-7-1-2-1-5-B-2-2-2-1-B*7	2016
37	CAH1722	SO4YLWL-96-B-1-1-B-1-BB/CL02450-BB	2016
38	ZH15286	CA14514-8-3-2-B*6/(CML20x(CML329))-17-3-3-1-B*11	2016
39	CAH1454	S87P69Q(SIYF)131-2-2-1-B*4/CML451-B*5	2016
40	ZH15281	DTPYC9-F46-3-9-1-2-2-1-3-B*6/(DT/LN/EM-46-3-1x(CML311-2-1-3))-B-F216-1-1-1-B*5-#	2016
41	ZH1617	CML269=P25STEC1F13-6-1-1-#-BBB-f-##-B*9-##-B/DTPWC9-F67-2-2-1-3-2-1-1-B*6	2016
42	ZH116128	5406-29P24STEC1HC17-4-2-1-1-B*6/CML451-BBB	2016
43	ZH15434	CA00310/AMATLCOHS71-1-1-2-1-1-1-B*11-#-B/CML472-BB	2016
44	ZH15279	P31C455B-6-*.3-1-B*8-3-B*6-##/(CML20x(CML329))-17-3-3-1-B*11-#	2017
45	ZH15410	LaPostaSeqC7-F71-1-2-1-2-B*5-##-B-#/CLRCY044-B*6-##	2017
46	ZH15400	DTPWC9-F55-2-1-1-2-3-1-2-B*4-#/P502c1#-771-2-2-3-B-1-1x(CML176)F2-1-1-2-3-B*6-##-BB	2017
47	ZH1619	CLRCY044-B*6-#-B-#/SO4YLWL-172-B-1-1-B-1-B*7-###	2017
48	ZH137087	SO4YLWL-96-B-1-1-B-1-B*5/(CLQ-6601xCL-02843)-B-26-1-1-BB-1-B*5	2017
49	ZH1679	(DT/LN/EM-46-3-1x(CML311-2-1-3))-B-F330-1-1-1-B-B1-BB-#-B/WLCY2-7-1-2-1-5-B-2-3-1-2-2-B*6-#	2017
50	ZH15416	CML452=Ac8328BNC6-166-1-1-1-B*13-##-B-##/WLCY2-7-1-2-1-5-B-2-3-1-2-2-B*6-#	2017
51	VH142085	(CML165xCL-02839)-B-22-1-1-BB-1-B*5/WLCY2-7-1-2-1-5-B-2-2-2-1-B*7	2017
52	ZH15267	(Pop61C1QPMTEYF-54-2-1-1-2-B-1-B/Pop61C1QPMTEYF-40-1-1-1-2-B-1)-B-3-B*4-#/CML474	2017
53	CAH177	(Pop61C1QPMTEYF-54-2-1-1-2-B-1-B/Pop61C1QPMTEYF-40-1-1-1-2-B-1)-B-3-B*4-#/CML470	2017
54	CAH1725	(POOL16BNSEQC3F22x1-3-2-2-2-BBB/CL02450-BB)-B-3-B-B2-B/CML472	2017
55	CAH1721	(POOL16BNSEQC3F22x1-3-2-2-2-BBB/CL02450-BB)-B-5-B-B2-B/CML472	2017
56	ZH15324	(POOL16BNSEQC3F22x1-3-2-2-2-BBB/CL02450-BB)-B-17-BBB-#/CML472-BBB	2017
57	ZH15331	(POOL16BNSEQC3F22x1-3-2-2-2-BBB/CL02450-BB)-B-8-BBB-#/CML472	2017
58	ZH15333	(Pop61C1QPMTEYF-54-2-1-1-2-B-1-B/(CML161x(CML451)-B-23-1-B*4-1)-B-20-BBB-#/CML472	2017
59	CAH1424	(CML165xKI45)-B-14-1-B*4-1-B*5-#/CML451-BB	2017
60	CAH199	Y-141,1-3-1-1-1-3-1-1-2-#-B-##/CML451-BB	2017
61	ZH1622	(CML337-B*4/CL02450-BB)-B-2-B*4-#/CML470	2017
62	CAH1714	WLCY2-7-1-2-1-5-B-2-3-1-2-2-B*6-#[GQL5/[GQL5/CML202]F2-3sx]-11-4-1-2-BB-1-BBB-#	2017
63	ZH15433	(DT/LN/EM-46-3-1x(CML311-2-1-3))-B-F239-1-1-1-B*5/CML472-BB	2017
64	ZH1756	PHZ51-##/CA14514-8-3-2-B*4-##	2017