

Table S1. Accessions names, ancestor germplasm or breeding germplasm (BP) and origin country of the 254 accessions of the Brazilian Panel of Sugarcane Genotypes (BPSG).

Accession	Female parent ²	Male parent ²	Origin ²	Group ³
28NG289	<i>S. robustum</i>	?	NA	A
57NG12	<i>S. robustum</i>	?	NA	A
75//09 ERIANTHUS	<i>Erianthus</i> spp.	?	NA	A
AGAU	<i>S. sinense</i>	?	South Africa	A
AGOLE	<i>S. barberi</i>	?	NA	A
AJA X	<i>S. officinarum</i>	?	NA	A
AKBAR	Co270	MQ27-1124	NA	A
ARCHI	<i>S. sinense</i>	?	Taiwan	A
AROUNDOID B	S. MUTANT	?	United States	A
BADILA	<i>S. officinarum</i>	NG9615	New Guinea	A
BLACK BORNEO	<i>S. officinarum</i>	?	Indonesia	A
CAIANA FITA	<i>S. officinarum</i>	?	NA	A
CAIANA LISTRADA	<i>S. officinarum</i>	?	NA	A
CAIANA RISCADA	<i>S. officinarum</i>	?	NA	A
CAIANA VERDADEIRA	<i>S. officinarum</i>	?	NA	A
CANA ALHO	<i>S. officinarum</i>	?	NA	A
CANA BLANCA	<i>S. officinarum</i>	?	NA	A
CANA MANTEIGA	<i>S. officinarum</i>	?	NA	A
CB36-14	Co213	?	Brazil	BB
CB36-24	POJ2878	?	Brazil	BB
CB36-25	POJ2878	?	Brazil	BB
CB36-68	?	?	Brazil	BB
CB40-13	POJ2878	Co290	Brazil	BB
CB40-77	POJ2878	Co290	Brazil	BB
CB41-76	POJ2878	?	Brazil	BB
CB45-155	Co413	?	Brazil	BB
CB45-3	Co331	Co290	Brazil	BB
CB46-47	POJ2878	?	Brazil	BB
CB47-355	POJ2878	Co413	Brazil	BB
CB49-260	CB44-36	?	Brazil	BB
CB53-98	CB46-40	?	Brazil	BB
CERAM RED	<i>S. officinarum</i>	?	NA	A
CHIN	<i>S. barberi</i>	?	India	A
CHINA	<i>S. sinense</i>	?	NA	A
CHUNNE	<i>S. barberi</i>	?	India	A
CIMCA77-316	CP66-346	CP70-321	Bolivia	A
CIMCA77-318	?	?	Bolivia	A
Co290	Co221	D74	India	FH
Co331	Co213	Co214	India	FH
Co419	POJ2878	Co290	India	FH
Co449	Co331	POJ2878	India	FH

S1 Table. Continued.

Accession	Female parent ²	Male parent ²	Origin ²	Group ³
Co740	P3247	P4775	India	FH
Co997	Co683	P63-32	India	FH
CP51-22	F36-819	CP33-372	United States	FH
CP52-68	CP29-320	CP38-34	United States	FH
CP53-76	F36-819	CP36-46	United States	FH
CP70-1547	?	?	United States	FH
CR72106	EROS	B49-119	Dominican Republic	FH
CRIOLLA MORADA	<i>S. officinarum</i>	?	NA	A
CRIOLLA RAYADA	<i>S. officinarum</i>	?	NA	A
CRISTALINA	<i>S. officinarum</i>	?	NA	A
D11/35	<i>S. officinarum</i>	?	United States	A
D152	B. cheribon	Batjan	NA	A
D625	Dyer	?	NA	A
F150	PT43-52	Nco-310	Taiwan	FH
F31-962	Co281	CP27-108	Taiwan	FH
F36-819	F31-962	POJ2878	Taiwan	FH
F76-1762	<i>Miscanthus</i> spp.	<i>S. officinarum</i>	NA	A
FORMOSA	<i>S. officinarum</i>	?	Taiwan	A
GANDACHENI	<i>S. barberi</i>	?	India	A
H. KAWANDANG	<i>Erianthus</i> spp.	?	Indonesia	A
H53-3989	H48-3717	?	United States	FH
H59-1966	H50-676	H49-3646	United States	FH
HJ5741	H40-1184	?	United States	A
IAC48-65	CP27-108	?	Brazil	BB
IAC49-131	CP27-108	?	Brazil	BB
IAC50-134	Co419	Co285	Brazil	BB
IAC51-205	POJ2878	?	Brazil	BB
IAC52-150	Co419	Co285	Brazil	BB
IAC58-480	POJ2878	CP44-101	Brazil	BB
IAC64-257	Co419	IAC49-131	Brazil	BB
IAC68-12	Co419	IAC52-179	Brazil	BB
IAC82-2045	IAC65-113	IAC52-150	Brazil	BB
IAC82-3092	CB41-76	IAC68-12	Brazil	BB
IAC83-4157	IAC68-12	SP70-1143	Brazil	BB
IAC86-2210	CP52-58	Co798	Brazil	BB
IAC87-3396	Co740	SP70-1143	Brazil	BB
IS76-155	<i>S. officinarum</i>	?	NA	A
IJ76-360	<i>S. edule</i>	?	NA	A
IJ76-293	<i>S. robustum</i>	?	Indonesia	A
IJ76-313	<i>S. officinarum</i>	?	Indonesia	A
IJ76-314	<i>S. robustum</i>	<i>S. officinarum</i>	Indonesia	A
IJ76-317	<i>S. officinarum</i>	?	Indonesia	A

S1 Table. Continued.

Accession	Female parent ²	Male parent ²	Origin ²	Group ³
IJ76-318	<i>S. robustum</i>	?	Indonesia	A
IJ76-325	<i>S. officinarum</i>	?	Indonesia	A
IJ76-326	<i>S. officinarum</i>	?	Indonesia	A
IJ76-418 RED	<i>S. officinarum</i>	?	Indonesia	A
IM76-227	<i>Erianthus</i> spp.	?	Indonesia	A
IM76-228	<i>S. robustum</i>	?	Indonesia	A
IM76-229	<i>S. robustum</i>	?	Indonesia	A
IN84-103	<i>S. officinarum</i>	?	Indonesia	A
IN84-104	<i>S. robustum</i>	?	Indonesia	A
IN84-105	<i>S. officinarum</i>	?	Indonesia	A
IN84-106	<i>S. officinarum</i>	?	Indonesia	A
IN84-117	<i>S. robustum</i>	?	Indonesia	A
IN84-46	<i>S. officinarum</i>	?	Indonesia	A
IN84-58	<i>S. spontaneum</i>	?	Indonesia	A
IN84-73	<i>Erianthus</i> spp.	?	NA	A
IN84-77	<i>Erianthus</i> spp.	?	NA	A
IN84-82	<i>S. spontaneum</i>	?	Indonesia	A
IN84-83	<i>Erianthus</i> spp.	?	NA	A
IN84-88	<i>S. spontaneum</i>	?	Indonesia	A
KRAKATAU	<i>S. spontaneum</i>	?	NA	A
L60-14	CP52-1	CP48-103	United States	FH
LAUKONA	<i>S. officinarum</i>	?	United States	A
LOUSER	<i>S. officinarum</i>	?	NA	A
MALI	405N1133	33MQ371	NA	FH
MANAII	<i>S. officinarum</i>	?	NA	A
MANERIA	<i>S. sinense</i>	?	India	A
MUNTOK JAVA	<i>S. officinarum</i>	?	Indonesia	A
MZ-151	<i>S. officinarum</i>	?	NA	A
NA56-79	Co419	Co419	Argentina	FH
Nco-310	Co421	Co312	South Africa	FH
NG21-17	<i>S. officinarum</i>	?	New Guinea	A
NG21-21	<i>S. officinarum</i>	?	New Guinea	A
NG57-50	<i>S. officinarum</i>	<i>S. spontaneum</i>	New Guinea	A
NG57-221	<i>S. officinarum</i>	?	New Guinea	A
NG77-18	<i>S. officinarum</i>	?	New Guinea	A
POJ161	Black Cheribon	Chunnee	Indonesia	A
POJ2878	POJ2364	EK28	Indonesia	FH
Q117	58N829	Q77	Australia	FH
Q165	Q 117	CP 33/372	Australia	FH
Q70	POJ2878	H31-2484	Australia	FH
R570	R445	H32-8560	Reunion Island	FH

S1 Table. Continued.

Accession	Female parent ²	Male parent ²	Origin ²	Group ³
RB002601	RB75126	Q107	Brazil	BB
RB002700	SP80-1816	?	Brazil	BB
RB002754	RB835205	?	Brazil	BB
RB721012	Co331	?	Brazil	BB
RB72199	NCo334	?	Brazil	BB
RB72454	CP53-76	?	Brazil	BB
RB725053	Co775	?	Brazil	BB
RB725828	NA56-79	?	Brazil	BB
RB732577	Nco-376	?	Brazil	BB
RB735200	Co331	?	Brazil	BB
RB735220	CB61-99	?	Brazil	BB
RB735275	IAC49-131	?	Brazil	BB
RB736018	M253/48	?	Brazil	BB
RB739735	CB52-179	?	Brazil	BB
RB75126	C278	?	Brazil	BB
RB765418	M253/48	?	Brazil	BB
RB785148	IAC47-31	?	Brazil	BB
RB785750	TUC67-11	?	Brazil	BB
RB806043	NA56-79	?	Brazil	BB
RB815521	NA56-79	?	Brazil	BB
RB815627	IAC49-131	NA56-79	Brazil	BB
RB815690	IAC49-131	NA56-79	Brazil	BB
RB825317	L60-14	CB47-355	Brazil	BB
RB825336	H53-3989	?	Brazil	BB
RB825548	F150	?	Brazil	BB
RB83100	NA56-79	SP70-1143	Brazil	BB
RB83102	NA56-79	SP70-1143	Brazil	BB
RB83160	NA56-79	SP70-1143	Brazil	BB
RB835019	RB72454	NA56-79	Brazil	BB
RB835054	RB72454	NA56-79	Brazil	BB
RB835089	RB72454	NA56-79	Brazil	BB
RB835205	Co740	?	Brazil	BB
RB835486	L60-14	?	Brazil	BB
RB835687	RB72454	NA56-79	Brazil	BB
RB845197	RB72454	SP70-1143	Brazil	BB
RB845210	RB72454	SP70-1143	Brazil	BB
RB845239	RB72454	SP70-1143	Brazil	BB
RB845257	RB72454	SP70-1143	Brazil	BB
RB845286	RB72454	SP70-1143	Brazil	BB
RB855002	SP70-1143	RB72454	Brazil	BB
RB855035	L60-14	SP70-1284	Brazil	BB
RB855036	RB72454	SP70-1143	Brazil	BB

S1 Table. Continued.

Accession	Female parent ²	Male parent ²	Origin ²	Group ³
RB855063	TUC71-7	SP70-1143	Brazil	BB
RB855070	SP70-1143	TUC71-7	Brazil	BB
RB855077	SP70-1143	TUC71-7	Brazil	BB
RB855113	SP70-1143	RB72454	Brazil	BB
RB855156	RB72454	TUC71-7	Brazil	BB
RB855196	RB72454	TUC71-7	Brazil	BB
RB855206	RB72454	TUC71-7	Brazil	BB
RB855350	RB72454	?	Brazil	BB
RB855357	RB72454	?	Brazil	BB
RB855453	TUC71-7	?	Brazil	BB
RB855463	RB72454	?	Brazil	BB
RB855465	RB72454	?	Brazil	BB
RB855511	SP71-1406	?	Brazil	BB
RB855533	NA56-79	?	Brazil	BB
RB855536	SP70-1143	RB72454	Brazil	BB
RB855546	SP70-1143	RB72454	Brazil	BB
RB855563	TUC71-7	SP70-1143	Brazil	BB
RB855574	SP70-1143	TUC71-7	Brazil	BB
RB855589	SP70-1143	TUC71-7	Brazil	BB
RB855595	SP70-1143	TUC71-7	Brazil	BB
RB855598	SP70-1143	TUC71-7	Brazil	BB
RB865214	RB735220	SP71-6163	Brazil	BB
RB867515	RB72454	?	Brazil	BB
RB925211	RB855206	?	Brazil	BB
RB925268	RB855511	?	Brazil	BB
RB925345	H59-1966	?	Brazil	BB
RB92579	RB75126	RB72199	Brazil	BB
RB935744	RB835089	RB765418	Brazil	BB
RB965902	RB855536	RB855453	Brazil	BB
RB965917	RB855453	RB855536	Brazil	BB
RB966928	RB855156	RB815690	Brazil	BB
RB975148	RB815521	RB835486	Brazil	BB
SABURA	<i>S. officinarum</i>	?	NA	A
SAC OFFIC 8272	<i>S. officinarum</i>	?	Malasia	A
SAC OFFIC 8276	<i>S. officinarum</i>	?	Malasia	A
SAC OFFIC 8280	<i>S. officinarum</i>	?	Malasia	A
SAC OFFIC 8284	<i>S. officinarum</i>	?	Malasia	A
SES205A	<i>S. spontaneum</i>	?	India	A

S1 Table. Continued.

Accession	Female parent ²	Male parent ²	Origin ²	Group ³
SP70-1005	IAC48-65	?	Brazil	BB
SP70-1078	IAC48-65	?	Brazil	BB
SP70-1143	IAC48-65	?	Brazil	BB
SP70-1284	CB41-76	?	Brazil	BB
SP70-1423	CB41-76	?	Brazil	BB
SP70-3370	CP53-17	?	Brazil	BB
SP71-1406	NA56-79	?	Brazil	BB
SP71-6949	NA56-79	?	Brazil	BB
SP71-799	NA56-79	?	Brazil	BB
SP72-4928	CP52-48	?	Brazil	BB
SP77-5181	HJ57-41	?	Brazil	BB
SP79-1011	NA56-79	Co775	Brazil	BB
SP79-2233	H56-2954	?	Brazil	BB
SP79-2312	SP71-6106	?	Brazil	BB
SP79-2313	SP71-6106	?	Brazil	BB
SP79-6192	SP70-3518	?	Brazil	BB
SP80-1520	H48-3166	SP71-1088	Brazil	BB
SP80-1816	SP71-1088	H57-5028	Brazil	BB
SP80-1836	SP71-1088	H57-5028	Brazil	BB
SP80-1842	SP71-1088	H57-5028	Brazil	BB
SP80-185	BO17	?	Brazil	BB
SP80-3280	SP71-1088	H57-5028	Brazil	BB
SP81-1763	co775	NA56-79	Brazil	BB
SP81-3250	CP70-1547	SP71-1279	Brazil	BB
SP83-2847	HJ5741	SP70-1143	Brazil	BB
SP83-5073	SP71-1406	SP71-1088	Brazil	BB
SP86-155	SP78-3081	?	Brazil	BB
SP89-1115	CP73-1547	?	Brazil	BB
SP91-1049	SP80-3328	SP81-3250	Brazil	BB
TUC71-7	CP52-68	CP62-258	Argentina	FH
UBA DEMERARA	<i>S. sinense</i>	?	NA	A
US57-141-5	<i>S. robustum</i>	?	NA	A
US60-31-3	28NG12	US57-159	United States	FH
US85-1008	<i>S. spontaneum</i>	US60-31-3	NA	A
WHITE MAURITIUS	<i>S. officinarum</i>	?	India	A
WHITE PARARIA	<i>S. barberi</i>	?	India	A
WHITE TRANSPARENT	<i>S. officinarum</i>	?	India	A
ZWART MANILA	<i>S. officinarum</i>	?	Indonesia	A

¹Accessions number in STRUCTURE analysis (Material and Methods section 2.3). ²Information from RIDESA germoplasm bank (<http://www.ridesaufscar.com.br>), Miami World Collection (<http://npgsweb.arsgrin.gov/gringlobal/search.aspx>) and Sugarcane Variety Notes (Rossi, 2000). NA: not available information. ³Predefined groups: ancestors accessions (A); accessions of *Saccharum* spp. hybrids from Brazilian breeding programs (BB); accessions of *Saccharum* spp. hybrids from foreign breeding programs - foreign hybrids (FH).