

**Table S1. Test accuracy analysis in 2020 and 2021.**

Year	Location	CV (%)	GCV (%)
2020	Baoshan	2.694	5.946
	Binchuan	9.458	2.162
	Chuxiong	1.723	5.526
	Gengma	2.861	9.852
	Lijiang	4.082	6.491
	Mile	8.420	9.173
	Shilin	5.227	5.939
	Xuanwei	3.651	9.544
	Yanshan	4.198	5.211
	Zhaotong	3.162	4.066
2021	Baoshan	3.933	6.987
	Binchuan	5.276	4.775
	Chuxiong	6.046	3.181
	Gengma	6.422	8.354
	Lijiang	9.209	5.342
	Mile	6.046	2.778
	Shilin	4.046	5.756
	Xuanwei	3.016	9.365
	Yanshan	11.373	7.468
	Zhaotong	2.691	6.300

Note: *CV*, coefficient of variation in each test; *GCV*, genetic coefficient of variation in each test.

**Table S2. Multiple comparison results by LSD method in two-year.**

Hybrids	Mean yield (Kg Ha <sup>-1</sup> )	Yield increased over CK (%)	0.05 level significance	0.01 level significance
LD-18	12298.75	20.16%	a	A
LD-19	11881.30	16.08%	ab	AB
ZY-811	11879.31	16.06%	ab	AB
LD-29	11803.81	15.32%	abc	ABC
YY-1503	11628.30	13.61%	bcd	ABCD
ZY-607	11614.21	13.47%	bcd	ABCD
ZY-609	11579.90	13.13%	bcd	ABCD
LX-1	11476.45	12.12%	bcd	BCD
YY-1506	11467.17	12.03%	bcd	BCD
JL-118	11401.64	11.39%	bcde	BCD
DY-201	11311.01	10.51%	cde	BCD
DY-502	11070.54	8.16%	de	CD
DY-602	10854.75	6.05%	e	DE
<u>HH-2(CK)</u>	<u>10235.71</u>	<u>0.00%</u>	<u>f</u>	<u>E</u>

Note:  $LSD_{0.05} = 37.5351$ ,  $LSD_{0.01} = 52.2378$