

# Diversity, Resistance to Thiophanate-methyl of *Colletotrichum* Spp. in Strawberry Nursery and the Development of Rapid Detection Using LAMP Method

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**Table S1** *Colletotrichum* spp. used in multi-gene analysis in this study.

Species	Sample number	Isolates	Host	Country	GenBank no.				
					ITS	ACT	CAL	CHS-1	GAPDH
<i>C. aenigma</i>	/	ICMP 18686*	<i>Pyrus pyrifolia</i>	Japan	JX010243	JX009519	JX009684	JX009789	JX009913
	ZJNS-72	ZJLA-W062	<i>Fragaria × ananassa</i>	Nursery, Zhejiang, China	OP602727	OP610857	OP610862	OP610867	OP610872
	ZJNS-78	ZJLA-W066	<i>Fragaria × ananassa</i>	Nursery, Zhejiang, China	OP602728	OP610858	OP610863	OP610868	OP610873
	ZJNS-80	ZJLA-W068	<i>Fragaria × ananassa</i>	Nursery, Zhejiang, China	OP602729	OP610859	OP610864	OP610869	OP610874
	ZJNS-105	ZJLA-W092	<i>Fragaria × ananassa</i>	Nursery, Zhejiang, China	OP617678	OP642040	OP642042	OP642044	OP642046
	ZJNS-110	ZJLA-W097	<i>Fragaria × ananassa</i>	Nursery, Zhejiang, China	OP617679	OP642041	OP642043	OP642045	OP642047
<i>C. boninense</i>	/	CBS 123755*	<i>Crinum asiaticum</i> var. <i>sinicum</i>	Japan	JX010292	JX009583	JQ005674	JX009827	JX009905
<i>C. fructicola</i>	/	ICMP 18581*	<i>Coffea arabica</i>	Thailand	JX010165	FJ907426	FJ917508	JX009866	JX010033
	ZJNS-3	ZJLA-W002	<i>Fragaria × ananassa</i>	Nursery, Zhejiang, China	OP602732	OP610709	OP610746	OP610783	OP610820
	ZJNS-11	ZJLA-W009	<i>Fragaria × ananassa</i>	Nursery, Zhejiang, China	OP602733	OP610710	OP610747	OP610784	OP610821
	ZJNS-13	ZJLA-W010	<i>Fragaria × ananassa</i>	Nursery, Zhejiang, China	OP602734	OP610711	OP610748	OP610785	OP610822
	ZJNS-14	ZJLA-W011	<i>Fragaria × ananassa</i>	Nursery, Zhejiang, China	OP602735	OP610712	OP610749	OP610786	OP610823

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ZJNS-18	ZJLA-W013	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602736	OP610713	OP610750	OP610787	OP610824
ZJNS-19	ZJLA-W014	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602737	OP610714	OP610751	OP610788	OP610825
ZJNS-20	ZJLA-W015	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602738	OP610715	OP610752	OP610789	OP610826
ZJNS-22	ZJLA-W017	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602739	OP610716	OP610753	OP610790	OP610827
ZJNS-23	ZJLA-W018	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602740	OP610717	OP610754	OP610791	OP610828
ZJNS-24	ZJLA-W019	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602741	OP610718	OP610755	OP610792	OP610829
ZJNS-25	ZJLA-W020	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602742	OP610719	OP610756	OP610793	OP610830
ZJNS-26	ZJLA-W021	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602743	OP610720	OP610757	OP610794	OP610831
ZJNS-27	ZJLA-W022	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602744	OP610721	OP610758	OP610795	OP610832
ZJNS-28	ZJLA-W023	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602745	OP610722	OP610759	OP610796	OP610833
ZJNS-29	ZJLA-W024	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602746	OP610723	OP610760	OP610797	OP610834
ZJNS-30	ZJLA-W025	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602747	OP610724	OP610761	OP610798	OP610835
ZJNS-34	ZJLA-W028	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602748	OP610725	OP610762	OP610799	OP610836
ZJNS-35	ZJLA-W029	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602749	OP610726	OP610763	OP610800	OP610837
ZJNS-36	ZJLA-W030	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602750	OP610727	OP610764	OP610801	OP610838
ZJNS-38	ZJLA-W032	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602751	OP610728	OP610765	OP610802	OP610839
ZJNS-53	ZJLA-W046	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602752	OP610729	OP610766	OP610803	OP610840
ZJNS-54	ZJLA-W047	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602753	OP610730	OP610767	OP610804	OP610841
ZJNS-55	ZJLA-W048	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602754	OP610731	OP610768	OP610805	OP610842
ZJNS-56	ZJLA-W049	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602755	OP610732	OP610769	OP610806	OP610843
ZJNS-59	ZJLA-W051	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602756	OP610733	OP610770	OP610807	OP610844
ZJNS-61	ZJLA-W052	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602757	OP610734	OP610771	OP610808	OP610845
ZJNS-62	ZJLA-W053	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602758	OP610735	OP610772	OP610809	OP610846
ZJNS-73	ZJLA-W063	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602759	OP610736	OP610773	OP610810	OP610847
ZJNS-74	ZJLA-W064	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602760	OP610737	OP610774	OP610811	OP610848
ZJNS-76	ZJLA-W065	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602761	OP610738	OP610775	OP610812	OP610849

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	ZJNS-79	ZJLA-W067	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602762	OP610739	OP610776	OP610813	OP610850
	ZJNS-90	ZJLA-W078	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602763	OP610740	OP610777	OP610814	OP610851
	ZJNS-91	ZJLA-W079	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602764	OP610741	OP610778	OP610815	OP610852
	ZJNS-92	ZJLA-W080	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602765	OP610742	OP610779	OP610516	OP610853
	ZJNS-100	ZJLA-W088	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602766	OP610743	OP610780	OP610817	OP610854
	ZJNS-101	ZJLA-W089	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602767	OP610744	OP610781	OP610818	OP610855
	ZJNS-103	ZJLA-W090	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602768	OP610745	OP610782	OP610819	OP610856
	/	IMI 356878*	<i>Citrus sinensis</i>	Italy	JX010152	JX009531	JX009731	JX009818	JX010056
	ZJNS-2	ZJLA-W001	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602945	OP611101	OP611108	OP611115	OP611122
	ZJNS-4	ZJLA-W003	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602946	OP611102	OP611109	OP611116	OP611123
	ZJNS-7	ZJLA-W006	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602947	OP611103	OP611110	OP611117	OP611124
<i>C. gloeosporioides</i>	ZJNS-21	ZJLA-W016	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602948	OP611104	OP611111	OP611118	OP611125
	ZJNS-37	ZJLA-W031	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602949	OP611105	OP611112	OP611119	OP611126
	ZJNS-45	ZJLA-W039	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602950	OP611106	OP611113	OP611120	OP611127
	ZJNS-47	ZJLA-W041	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602951	OP611107	OP611114	OP611121	OP611128
<i>C. salsolae</i>	/	ICMP 19051*	<i>Salsola tragus</i>	Hungary	JX010242	JX009562	JX009696	JX009863	JX009916
	/	ICMP 17785*	<i>Malus domestica</i>	USA	JX010272	JX009446	JX009706	JX009804	JX010051
	/	ICMP 18572*	<i>Vitis vinifera</i>	USA	JX010160	JX009487	JX009705	JX009783	JX010061
	ZJNS-5	ZJLA-W004	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602769	OP610933	OP610877	OP610988	OP611045
	ZJNS-6	ZJLA-W005	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602770	OP610934	OP610878	OP610989	OP611046
	ZJNS-8	ZJLA-W007	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602771	OP610935	OP610879	OP610991	OP611047
<i>C. siamense</i>	ZJNS-9	ZJLA-W008	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602772	OP610936	OP610880	OP610992	OP611048
	ZJNS-16	ZJLA-W012	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602773	OP610937	OP610881	OP610993	OP611049
	ZJNS-31	ZJLA-W026	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602774	OP610938	OP610882	OP610994	OP611050
	ZJNS-32	ZJLA-W027	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602775	OP610939	OP610883	OP610995	OP611051
	ZJNS-39	ZJLA-W033	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602776	OP610940	OP610084	OP610996	OP611052

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ZJNS-40	ZJLA-W034	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602777	OP610941	OP610885	OP610997	OP611053
ZJNS-41	ZJLA-W035	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602778	OP610942	OP610886	OP610998	OP611054
ZJNS-42	ZJLA-W036	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602779	OP610943	OP610887	OP610999	OP611055
ZJNS-43	ZJLA-W037	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602780	OP610944	OP610888	OP611000	OP611056
ZJNS-44	ZJLA-W038	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602781	OP610945	OP610889	OP611001	OP611057
ZJNS-46	ZJLA-W040	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602782	OP610946	OP610890	OP611002	OP611058
ZJNS-49	ZJLA-W042	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602783	OP610947	OP610891	OP611003	OP611059
ZJNS-50	ZJLA-W043	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602784	OP610948	OP610892	OP611004	OP611060
ZJNS-51	ZJLA-W044	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602785	OP610949	OP610893	OP611005	OP611061
ZJNS-52	ZJLA-W045	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602786	OP610950	OP610894	OP611006	OP611062
ZJNS-57	ZJLA-W050	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602787	OP610951	OP610895	OP611007	OP611063
ZJNS-63	ZJLA-W054	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602788	OP610952	OP610896	OP611008	OP611064
ZJNS-64	ZJLA-W055	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602789	OP610953	OP610897	OP611009	OP611065
ZJNS-65	ZJLA-W056	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602790	OP610954	OP610898	OP611010	OP611066
ZJNS-66	ZJLA-W057	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602791	OP610955	OP610899	OP611011	OP611067
ZJNS-67	ZJLA-W058	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602792	OP610956	OP610900	OP611012	OP611068
ZJNS-68	ZJLA-W059	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602793	OP610957	OP610901	OP611013	OP611069
ZJNS-69	ZJLA-W060	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602794	OP610958	OP610902	OP611014	OP611070
ZJNS-70	ZJLA-W061	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP622281	OP642039	OP642048	OP642049	OP642050
ZJNS-81	ZJLA-W069	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602796	OP610960	OP610904	OP611016	OP611072
ZJNS-82	ZJLA-W070	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602797	OP610961	OP610905	OP611017	OP611073
ZJNS-83	ZJLA-W071	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602798	OP610962	OP610906	OP611018	OP611074
ZJNS-84	ZJLA-W072	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602799	OP610963	OP610907	OP611019	OP611075
ZJNS-85	ZJLA-W073	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602800	OP610964	OP610908	OP611020	OP611076
ZJNS-86	ZJLA-W074	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602801	OP610965	OP610909	OP611021	OP611077
ZJNS-87	ZJLA-W075	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602802	OP610966	OP610910	OP611022	OP611078

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	ZJNS-88	ZJLA-W076	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602803	OP610967	OP610911	OP611023	OP611079
	ZJNS-89	ZJLA-W077	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602804	OP610968	OP610912	OP611024	OP611080
	ZJNS-93	ZJLA-W081	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602805	OP610969	OP610913	OP611025	OP611081
	ZJNS-94	ZJLA-W082	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602806	OP610970	OP610914	OP611026	OP611082
	ZJNS-95	ZJLA-W083	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602807	OP610971	OP610915	OP611027	OP611083
	ZJNS-96	ZJLA-W084	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602808	OP610972	OP610916	OP611028	OP611084
	ZJNS-97	ZJLA-W085	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602809	OP610973	OP610917	OP611029	OP611085
	ZJNS-98	ZJLA-W086	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602810	OP610974	OP610918	OP611030	OP611086
	ZJNS-99	ZJLA-W087	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602811	OP610975	OP610919	OP611031	OP611087
	ZJNS-104	ZJLA-W091	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602812	OP610976	OP610920	OP611032	OP611088
	ZJNS-106	ZJLA-W093	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602813	OP610977	OP610921	OP611033	OP611089
	ZJNS-107	ZJLA-W094	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602814	OP610978	OP610922	OP611034	OP611090
	ZJNS-108	ZJLA-W095	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602815	OP610979	OP610923	OP611035	OP611091
	ZJNS-109	ZJLA-W096	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602816	OP610980	OP610924	OP611036	OP611092
	ZJNS-111	ZJLA-W098	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602817	OP610981	OP610925	OP611037	OP611093
	ZJNS-112	ZJLA-W099	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602818	OP610982	OP610926	OP611038	OP611094
	ZJNS-113	ZJLA-W100	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602819	OP610983	OP610927	OP611039	OP611095
	ZJNS-114	ZJLA-W101	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602820	OP610984	OP610928	OP611040	OP611096
	ZJNS-115	ZJLA-W102	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602821	OP610985	OP610929	OP611041	OP611097
	ZJNS-116	ZJLA-W103	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602822	OP610986	OP610930	OP611042	OP611098
	ZJNS-117	ZJLA-W104	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602823	OP610987	OP610931	OP611043	OP611099
	ZJNS-120	ZJLA-W105	<i>Fragaria</i> × <i>ananassa</i>	Nursery, Zhejiang, China	OP602824	OP610988	OP610932	OP611044	OP611100
<i>C. theobromicola</i>	/	ICMP 18649*	<i>Theobroma cacao</i>	Panama	JX010294	JX009444	JX009591	JX009869	JX010006
<i>C. tropicale</i>	/	ICMP 18653*	<i>Theobroma cacao</i>	Panama	JX010264	JX009489	JX009719	JX009870	JX010007
<i>C. viniferum</i>	/	CAUG27*	<i>Capsicum</i> sp.	China	KP145440	KP145328	KP145356	KP145384	KP145412
<i>C. xanthorrhoeae</i>	/	ICMP 17903*	<i>Xanthorrhoea preissii</i>	Australia	JX010261	JX009478	JX009653	JX009823	JX009927

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11 reference isolates.