

Supplementary Table S1. Accession numbers of *Fusarium* strains used in the present study.

Group	FTSC*	Morphological species	Strain no.	Alternative strain no.**	TEF1 accession no.	TUB2 accession no.
Main group I	4	<i>F. avenaceum</i>	MFG 118702	av48 ^c	OK564512	AF405448
		<i>F. arthrosporioides</i>	MFG 58655	ar57 ^c	OK564512	AF405448
		<i>F. avenaceum</i>	BBA 64151	a2 ^b	JX397832	AF405448
		<i>F. arthrosporioides</i>	BBA 71186	ar7 ^b	OK564513	AF405448
		<i>F. anguioides</i>	MFG 114605	an41 ^c	OK564512	AF405448
		<i>F. anguioides</i>	MFG 119913	an42 ^c	KJ508146	NA
		<i>F. anguioides</i>	MFG 108904	an45 ^c	OK564510	AF405458
		<i>F. arthrosporioides</i>	BBA 67701	ar5 ^b	JX397826	AF405447
		<i>F. avenaceum</i>	KK12	NA	HQ704115	NA
		<i>F. avenaceum</i>	DDPP11.73	NA	HQ704082	NA
		<i>F. avenaceum</i>	F1	NA	HQ704106	NA
		<i>F. avenaceum</i>	18	NA	HQ704074	NA
		<i>F. avenaceum</i>	DDPP 042836	NA	HQ704102	NA
		<i>F. avenaceum</i>	DDPP 04032	NA	HQ704092	NA
		<i>F. avenaceum</i>	K-0238	NA	KJ508148	NA
		<i>F. avenaceum</i>	FCR R6679	NA	OL772751	NA
		<i>F. avenaceum</i>	NRRL 26890	NA	OL772749	NA
		<i>F. avenaceum</i>	FRC R-6751	NA	OL772752	NA
		<i>F. avenaceum</i>	FaLH27	NA ^d	JQGE000000 000	JQGE000000 00
		<i>F. avenaceum</i>	MRC 2195	FRC R6381	MH582393	NA
		<i>F. avenaceum</i>	CML 3538	NA	MK572765	NA
		<i>F. avenaceum</i>	J066	NA	JX534413	NA
		<i>F. avenaceum</i>	MRC 1413	NA	MH582392	NA
Main group II	4	<i>F. anguioides</i>	MFG 112804	an37 ^c	OK564510	AF405458
		<i>F. arthrosporioides</i>	BBA 70576	ar1 ^b	JX397834	AF405454
		<i>F. avenaceum</i>	FaLH03	NA ^d	JQGD0000 0000	JQGD000000 00
		<i>F. avenaceum</i>	NRRL 54939	Fa05001 ^d	JPYM01000 002	JPYM010000 02
		<i>F. avenaceum</i>	F093	NA	HQ020451	NA
		<i>F. avenaceum</i>	NRRL 25128	NA	JF740751	NA
		<i>F. avenaceum</i>	CBS 15957	NA		NA
		<i>F. avenaceum</i>	DDPP 09a1	NA	HQ704081	NA
		<i>F. anguioides</i>	MFG 74005	NA	KJ508134	NA
		<i>F. avenaceum</i>	F-132	NA	KU304436	NA
		<i>F. anguioides</i>	MFG 111502	NA	KU304432	NA
Main group V	4	<i>F. avenaceum</i>	NRRL 36069	CBS 101627	OL772758	NA
		<i>F. avenaceum</i>	NRRL 53589	CBS 386.62	OL772759	NA
		<i>F. avenaceum</i>	NRRL 53729	CBS 121289	OL772760	
		<i>F. avenaceum</i>	CBS 409.86	NA	HQ704078	NA
		<i>F.avenaceum</i>	05-003	NA	HQ704072	NA
		<i>F. avenaceum</i>	376	NA	HQ704075	NA

Intermediate group between main groups I and II	4	<i>F. avenaceum</i>	IBT 40026	NA	HQ704112	NA
		<i>F. avenaceum</i>	CBS 409.86	NA		
		<i>F. avenaceum</i>	DDPP 04401	NA***	HQ704098	NA
		<i>F. avenaceum</i>	379	NA	HQ704076	NA
	4	<i>F. avenaceum</i>	CML 3545	NA	MK572772	NA
		<i>F. avenaceum</i>	FCR R-9495		EU357823	EU357854
				NA		
		<i>F. avenaceum</i>	MFG 80310	NA	EU357823	NA
		<i>F. avenaceum</i>	F-2307	NA	KU304440	NA
		<i>F. avenaceum</i>	NRRL 36374	CBS 239.94	OL772755	NA
		<i>Gibberella tricineta</i>	NRRL 39591	ICMP 5244	OL772757	NA
		<i>F. avenaceum</i>	NRRL 53733	CBS 121294	OL772756	NA
Unknown group I	22	<i>F. avenaceum</i>	FRC R-6739	NA	OL772764	NA
		<i>F. avenaceum</i>	BBA 63201	a4 ^b	JX397829	NA
Main group III	11	<i>F. anguioides</i>	MFG 58314	an47 ^c	OK564511	EU357852
		<i>Fusarium</i> sp.	CML 3541	NA	MK572768	NA
		<i>F. avenaceum</i>	FRC-R9369	NA	EU357821	EU357852
		<i>F. avenaceum</i>	JRBK-5	NA	KY475585	KY475586
		<i>F. avenaceum</i>	SICAUCC 18-0001	NA	MK226333	MK253102
		<i>F. sp. nov-9</i>	MRC 2532	NA	MH582395	NA
		<i>F. avenaceum</i>	Fv5-9	NA	MK111429	NA
	27	<i>F. anguioides</i>	BBA 69055	an3 ^b	JX397839	AF405458
Main group IV	5	<i>F. avenaceum</i>	BBA 70177	a49 ^a , NRRL 26893	OK564509	AF405453
		<i>Fusarium</i> sp.	NRRL 52726	NA	JF740806	NA
		<i>Fusarium</i> sp.	KOD 810	NA		
		<i>F. avenaceum</i>	10992	NA	JX398938	JX398943
		<i>F. avenaceum</i>	E19/2-4	NA	MN976063	NA
Unknown group II	30	<i>F. arthrosporioides</i>	BBA 70561 ^{b,e}	ar2 ^b	JX397832	AF405455
Unknown group III	?	<i>F. avenaceum</i>	MFG 80212	NA	KJ508135	NA
Unknown group IV	34	<i>F. avenaceum</i>	BBA 70575 ^{b,e}	a5 ^b	JX397833	AF405461
	9	<i>F. torulosum</i>	NRRL 22747	NA	JABFMN 000000000	JABFMN000 000000
	3	<i>F. tricinatum</i>	NRRL 25481		JAALXJ000 000000	JAALXJ0000 000000
		<i>F. tricinatum</i>	BBA 64485	NA t6 ^b	JX397841	AF405452
	2	<i>F. acuminatum</i>	NRRL 36147	NA	GQ505420	NA

<i>F. acuminatum</i>	NRRL 62622		CBMG0100	CBMG01000
		CS5907	00000	0000

*FTSC marked according to [11]; **The alternative names of strains are from [47], [16], [5], [48], and [46] for a, b, c, d, and e, respectively; ***NA means not available.