

Supplementary Materials

Table S1. Strain code, species, geographic origin, host and trichothecene chemotype of *Fusarium graminearum* species complex strains used in the study.

	Species	Geographic origin	Host	Trichothecene chemotype
CS7402	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7300	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7399	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7403	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7293	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7295	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7333	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7340	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7206	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7404	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7227	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7214	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7216	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7345	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7341	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7357	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS3187	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7339	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7441	<i>F. graminearum</i> s.s	Australia	Wheat	15-ADON
CS7220	<i>F. meridionale</i>	Australia	Wheat	NIV
BR002	<i>F. graminearum</i> s.s	Brazil	Wheat	15-ADON
BR004	<i>F. graminearum</i> s.s	Brazil	Wheat	15-ADON
BR005	<i>F. graminearum</i> s.s	Brazil	Wheat	15-ADON
BR008	<i>F. graminearum</i> s.s	Brazil	Wheat	15-ADON
BR009	<i>F. graminearum</i> s.s	Brazil	Wheat	15-ADON
BR011	<i>F. graminearum</i> s.s	Brazil	Wheat	15-ADON
BR012	<i>F. graminearum</i> s.s	Brazil	Wheat	15-ADON
BR014	<i>F. graminearum</i> s.s	Brazil	Wheat	15-ADON
BR016	<i>F. graminearum</i> s.s	Brazil	Wheat	15-ADON
BR017	<i>F. graminearum</i> s.s	Brazil	Wheat	15-ADON
BR001	<i>F.austroamericanum</i>	Brazil	Wheat	NIV
BR003	<i>F. cortaderiae</i>	Brazil	Wheat	NIV
BR006	<i>F. cortaderiae</i>	Brazil	Wheat	NIV
BR007	<i>F. meridionale</i>	Brazil	Wheat	NIV
BR013	<i>F. meridionale</i>	Brazil	Wheat	NIV
NB0618	<i>F. graminearum</i> s.s	Canada	Wheat	15-ADON
Q0622	<i>F. graminearum</i> s.s	Canada	Wheat	15-ADON
DFFG109	<i>F. graminearum</i> s.s	Canada	Wheat	15-ADON
DFFG144	<i>F. graminearum</i> s.s	Canada	Wheat	15-ADON
DFFG102	<i>F. graminearum</i> s.s	Canada	Wheat	15-ADON
S3AN0601	<i>F. graminearum</i> s.s	Canada	Wheat	15-ADON
ON0617	<i>F. graminearum</i> s.s	Canada	Wheat	15-ADON
DFFG30	<i>F. graminearum</i> s.s	Canada	Wheat	15-ADON
ON0605	<i>F. graminearum</i> s.s	Canada	Wheat	15-ADON

PEI0634	<i>F. graminearum s.s</i>	Canada	Wheat	15-ADON
M50601	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
M20601	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
A20601	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
NB0617	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
A60601	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
NS0602	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
ON0639	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
PEI0633	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
MIN11	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
NB0617	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
S3BS0601	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
DFFG120	<i>F. graminearum s.s</i>	Canada	Wheat	3-ADON
CHW52707	<i>F. graminearum s.s</i>	China	Wheat	15-ADON
CHW52611	<i>F. graminearum s.s</i>	China	Wheat	15-ADON
CHM4175	<i>F. graminearum s.s</i>	China	Wheat	15-ADON
CHM4055	<i>F. graminearum s.s</i>	China	Wheat	15-ADON
CHW52701	<i>F. asiaticum</i>	China	Wheat	15-ADON
CHW56708	<i>F. graminearum s.s</i>	China	Wheat	15-ADON
CHW56707	<i>F. graminearum s.s</i>	China	Wheat	15-ADON
CHM3034	<i>F. graminearum s.s</i>	China	Maize	15-ADON
CHM1265	<i>F. graminearum s.s</i>	China	Maize	15-ADON
CHW54601	<i>F. asiaticum</i>	China	Wheat	3-ADON
CHW54603	<i>F. asiaticum</i>	China	Wheat	3-ADON
CHW54611	<i>F. asiaticum</i>	China	Wheat	15-ADON
CH54604	<i>F. asiaticum</i>	China	Wheat	NIV
CHW54612	<i>F. asiaticum</i>	China	Wheat	15-ADON
CHW54602	<i>F. asiaticum</i>	China	Wheat	3-ADON
CHW52516	<i>F. asiaticum</i>	China	Wheat	NIV
CHWM25011	<i>F. meridionale</i>	China	Maize	NIV
CHM15026	<i>F. meridionale</i>	China	Maize	NIV
CHW52517	<i>F. asiaticum</i>	China	Wheat	NIV
CHM5282	<i>F. meridionale</i>	China	Maize	NIV
CHM5292	<i>F. meridionale</i>	China	Maize	NIV
CHM25040	<i>F. meridionale</i>	China	Maize	NIV
CHM4048	<i>F. meridionale</i>	China	Maize	NIV
GFG175	<i>F. graminearum s.s</i>	Germany	Wheat	15-ADON
G4D16	<i>F. graminearum s.s</i>	Germany	Wheat	15-ADON
GFG170	<i>F. graminearum s.s</i>	Germany	Wheat	15-ADON
GFG164	<i>F. graminearum s.s</i>	Germany	Wheat	15-ADON
GFG40	<i>F. graminearum s.s</i>	Germany	Wheat	15-ADON
GFG9211	<i>F. graminearum s.s</i>	Germany	Wheat	15-ADON
GFG2311	<i>F. graminearum s.s</i>	Germany	Wheat	15-ADON
GFG164	<i>F. graminearum s.s</i>	Germany	Wheat	15-ADON
GFG168	<i>F. graminearum s.s</i>	Germany	Wheat	15-ADON
G9D29	<i>F. graminearum s.s</i>	Germany	Wheat	3-ADON
GFG4	<i>F. graminearum s.s</i>	Germany	Wheat	3-ADON
GFG5	<i>F. graminearum s.s</i>	Germany	Wheat	3-ADON
GFG2	<i>F. graminearum s.s</i>	Germany	Wheat	3-ADON
G12D30	<i>F. graminearum s.s</i>	Germany	Wheat	3-ADON
GFG12	<i>F. graminearum s.s</i>	Germany	Wheat	3-ADON

G8D35	<i>F. graminearum s.s</i>	Germany	Wheat	3-ADON
G21D14	<i>F. graminearum s.s</i>	Germany	Wheat	NIV
G21D6	<i>F. graminearum s.s</i>	Germany	Wheat	NIV
GFG6	<i>F. graminearum s.s</i>	Germany	Wheat	NIV
GFG1111	<i>F. graminearum s.s</i>	Germany	Wheat	NIV
MEX001	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX002	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX003	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX004	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX005	<i>F. boothii</i>	Mexico	Barley	15-ADON
MEX006	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX007	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX008	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX009	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX011	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX012	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX013	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX014	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX015	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX016	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX017	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX019	<i>F. boothii</i>	Mexico	Wheat	15-ADON
MEX010	<i>F. meridionale</i>	Mexico	Wheat	NIV
PO001	<i>F. graminearum s.s</i>	Poland	Wheat	15-ADON
PO002	<i>F. graminearum s.s</i>	Poland	Wheat	15-ADON
PO004	<i>F. graminearum s.s</i>	Poland	Wheat	15-ADON
PO005	<i>F. graminearum s.s</i>	Poland	Wheat	15-ADON
PO008	<i>F. graminearum s.s</i>	Poland	Wheat	15-ADON
PO003	<i>F. graminearum s.s</i>	Poland	Wheat	3-ADON
PO006	<i>F. graminearum s.s</i>	Poland	Wheat	3-ADON
PO007	<i>F. graminearum s.s</i>	Poland	Wheat	3-ADON
PO009	<i>F. graminearum s.s</i>	Poland	Wheat	3-ADON
PO010	<i>F. graminearum s.s</i>	Poland	Wheat	3-ADON
PO011	<i>F. graminearum s.s</i>	Poland	Wheat	3-ADON
PO012	<i>F. graminearum s.s</i>	Poland	Wheat	3-ADON
FC772	<i>F. graminearum s.s</i>	UK	Wheat	15-ADON
FC1878	<i>F. graminearum s.s</i>	UK	Wheat	15-ADON
FC1876	<i>F. graminearum s.s</i>	UK	Wheat	15-ADON
FC1874	<i>F. graminearum s.s</i>	UK	Wheat	15-ADON
FC1880	<i>F. graminearum s.s</i>	UK	Wheat	15-ADON
FC1835	<i>F. graminearum s.s</i>	UK	Wheat	15-ADON
FC778	<i>F. graminearum s.s</i>	UK	Wheat	3-ADON
FC1792	<i>F. graminearum s.s</i>	UK	Wheat	3-ADON
FC1068	<i>F. graminearum s.s</i>	UK	Wheat	3-ADON
FC253	<i>F. graminearum s.s</i>	UK	Wheat	3-ADON
FC1067	<i>F. graminearum s.s</i>	UK	Wheat	3-ADON
FC989	<i>F. graminearum s.s</i>	UK	Wheat	3-ADON
FC974	<i>F. graminearum s.s</i>	UK	Wheat	3-ADON
FC1868	<i>F. graminearum s.s</i>	UK	Wheat	3-ADON
FC1394	<i>F. graminearum s.s</i>	UK	Wheat	3-ADON
FC1095	<i>F. graminearum s.s</i>	UK	Wheat	3-ADON

FC1828	<i>F. graminearum</i> s.s	UK	Wheat	3-ADON
FC1264	<i>F. graminearum</i> s.s	UK	Wheat	3-ADON
FC1259	<i>F. graminearum</i> s.s	UK	Wheat	3-ADON
FC1399	<i>F. graminearum</i> s.s	UK	Wheat	3-ADON

Table S2. List of primers and sequences used to identify the chemotypes of *Fusarium graminearum* species complex strains.

Primer name	Gene	Sequence 5'-3'	Reference
3CON	<i>TRI3</i>	TGGCAAAGACTGGTTCAC	Ward et al. [20]
3NA	<i>TRI3</i>	GTGCACAGAATATACGAGC	Ward et al. [20]
3D15A	<i>TRI3</i>	ACTGACCCAAGCTGCCATC	Ward et al. [20]
3D3A	<i>TRI3</i>	CGCATTGGCTAACACATG	Ward et al. [20]
EF-1	<i>EF-1α</i>	ATGGGTAAGGARGACAAGAC	O'Donnell et al. [8,11]
EF-2	<i>EF-1α</i>	GGARGTACCAGTSATCATGTT	O'Donnell et al. [8,11]