

Table S1. Characteristics of the *Fusarium* strains used

Strain	Origin	Year	Mating population	Mycotoxin production	EF-1 α (Accession n°)	EF-1 α sequence
<i>F. verticillioides</i> M7075	Maize	1997	A	Fumonisin		AcgTCGACTCTGGCAAGTCGACCACTGTGAGTACTACCCTTG ACGATGAGCTTATCGGCCATCGTAAACCCGGCCAAGACCTG GCGGGGGATTCTCAAAGAAAACATACTGATATCGCTTCACA GACCGGTCACTTGATCTACCACTGCGGTGGTATCGACAAGC GAACCATCGAGAAGTTCGAGAAGGTTAGTCACTTTTCCTTCT ATCGCGCGTTCTTTGCCATCGATTCCCCCTACGACTCGAA ACGTACCCGCTACCCCGCTCGAGCCCAAAATTTTGCGATAC GACCGTAATTTTTCTGGTGGGGCATTACCCCGCCACTCGA GCGGCGCGTTCTGCCCTCTCCATTCCACAACCTCACTGA GCTCATCGTCACGTGTCAAGCAGTCACTAACCATCCGACAAT AGGAAGCCGCTGAGCTCGGTAAGGGTTCCTTCAAGTACGCC TGGGTTCTTGACAAGCTCAAGGCCGAGCGTGAGCGTGGTAT CACCATCGATATCGCTCTCTGGAAGTTCGAGACTCCTCGCTA CTATGTCACCGTCATTGGTATGTTGTCGCTCTTACTCCGTTCT ATATCTCCTATTACTAACACATCACATAGACGCTCCCGGTCA CCGTGATTCATCAAGAACA¹
<i>F. proliferatum</i> RC2080	Maize	1997	D	Fumonisin		GTCGTCATCGGCCACGTGACTCTGGCAaGTGACCACTGT GAGTACTACCCTGGACGATGAGCTTATCTGCCATCGTGATCC TGACCAAGATCTGGCGGGGTACATCTTGGAAGACAATATGCT GACATCGCTTCACAGACCGGTCACTTGATCTACCACTGCGGT GGTATCGACAAGCGAACCATCGAGAAGTTCGAGAAGGTTAG TCACTTTCCCTTCGATCGCGCGTCCTCTGCCACCGATTTC CTTGCGATTGAAACGTGCCTGCTACCCCGCTCGAGACCAA AATTTTTGCGATATGACCGTAATTTTTTTGGTGGGGCATTAC CCCGCCACTCGAGCGATGAGCGCGTTTTTGCCCTTCTCTGT CCACAACCTCAATGAGCGCATTGTCACGTGTCAAGCAGCGA CTAACCATTGACAATAGGAAGCCGCTGAGCTCGGTAAGGG

						TTCCTTCAAGTACGCCTGGGTTCTTGACAAGCTCAAGGCCGA GCGTGAGCGTGGTATCACCATCGATATTGCTCTCTGGAAGTT CGAGACTCCTCGCTACTATGTCACCGTCATTGGTATGTTGTC GCTCATACCTCATCCTACTTCCTCATACTAACACATCAT ²
<i>F. graminearum</i> RC22-2	wheat	2002	Ability to produce homothallic perithecia	DON		TGAtgaaatCAcGgtGAcCGGGAGCGTCTGATAGCCATGTTAGTA TGAGAATGTGATGACAGCAGTGGTGACAACATACCAATGACG GTGACATAGTAGCGAGGAGTCTCGAACTTCCAGAGGGCGAT ATCAATGGTGATACCACGCTCACGCTCGGCTTTGAGCTTGTC AAGAACCCAGGCGTACTTGAAGGAACCCTTACCGAGCTCGG CGGCTTCCTATTGACAGGTGGTTAGTGACTGGTTGACACGTG ATGATGAGCGCCCAGGGAATGGTTTGTGGGAAGAGGGCAGA CGCCTGTCGCTCGAGTGGCGGGGTATGAGCCCCACCGGGG GAAAAAATTACGACAAAGCCGCAAAATTTTGGACCTCGAGCG GGGTAACAGGCGCGTATCGAGTCGTCGTGTGAGGGCGATTG GAATGATATTTGAAAAGGGAAAAGGGCGCGCGAtCGAGGAAA AtGAGACCAACCTTCTCGAACTTCTCGATGGTTTCGcttGtCGAtA CCACCGCactGGtAgaTCAAGTGACcGGtcTatcaaagtatgtcagcacat tggaaatttgaaactacccc ³
<i>F. graminearum</i> RCFG6001	wheat	2008	Ability to produce homothallic perithecia	DON, 15- ADON	KX359399	

¹ 100 % Ident. with *F. verticillioides* NRRL 25087, accession number: JF740717.1; ² 100 % Ident. with *F. proliferatum* NRRL 25082, accession number: JF740713.1; ³ 99.8 % Ident. with *F. graminearum* NRRL 40567, accession number: X087140.1