

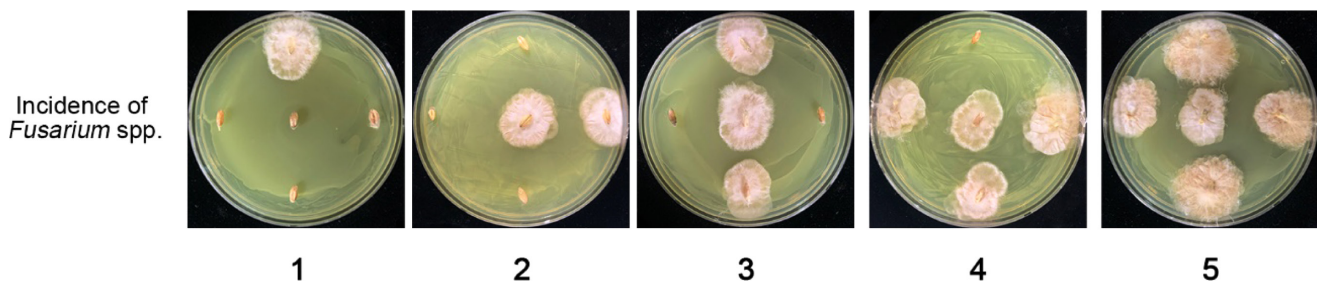
Supplementary Table 2. Fungal strains used in this study

Species	Strain number	Origin
<i>Alternaria alternata</i>	79-1	Miryang, Republic of Korea, 2022
<i>Botrytis cinerea</i>	B05.10	Korea Research Institute of Bioscience and Biotechnology (Daejeon, Republic of Korea)
<i>Burkholderia glumae</i>	BGR1	Jeong et al. (2003)
<i>Colletotrichum scovillei</i>	20GJK2	Spicy pepper
<i>Fusarium graminearum</i>	Z-3639	Bowden and Leslie (1999)
<i>Fusarium oxysporum</i>	4287	Ma et al. (2010)
<i>Fusarium venenatum</i>	KACC49797	Rural Development Administration (Jeonju, Republic of Korea)
<i>Magnaporthe oryzae</i>	P1181432	Fungal Plant Pathology Lab. (Seoul National University, Seoul, Republic of Korea)
<i>Fusarium asiaticum</i>	HJ1	Barley (Gimje, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ2	Wheat (Hapcheon, Republic of Korea, 2023)
<i>Fusarium graminearum</i>	HJ3	Wheat (Hapcheon, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ4	Barley (Gangjin, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ5	Wheat (Haenam, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ6	Barley (Haenam, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ7	Barley (Haenam, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ8	Wheat (Haenam, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ9	Barley (Hapcheon, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ10	Barley (Hapcheon, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ11	Wheat (Yeongam, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ12	Wheat (Yeongam, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ13	Wheat (Buan, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ14	Barley (Buan, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ15	Barley (Jinju, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ16	Wheat (Jinju, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ17	Barley (Jinju, Republic of Korea, 2023)
<i>Fusarium graminearum</i>	HJ18	Barley (Jinju, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ19	Barley (Jinju, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ20	Wheat (Sacheon, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ21	Wheat (Sacheon, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ22	Wheat (Sacheon, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ23	Wheat (Sacheon, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ24	Wheat (Sacheon, Republic of Korea, 2023)
<i>Fusarium graminearum</i>	HJ25	Barley (Goseong, Republic of Korea, 2023)
<i>Fusarium graminearum</i>	HJ26	Barley (Goseong, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ27	Wheat (Boseong, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ28	Wheat (Uiryeong, Republic of Korea, 2023)
<i>Fusarium graminearum</i>	HJ29	Wheat (Hapcheon, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ30	Wheat (Hapcheon, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ31	Wheat (Hapcheon, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ32	Barley (Miryang, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ33	Barley (Miryang, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ34	Barley (Miryang, Republic of Korea, 2023)

(Continued)

Supplementary Table 2. Continued

Species	Strain number	Origin
<i>Fusarium graminearum</i>	HJ35	Barley (Miryang, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ36	Barley (Miryang, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ37	Barley (Miryang, Republic of Korea, 2023)
<i>Fusarium graminearum</i>	HJ38	Barley (Miryang, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ39	Barley (Daegu, Republic of Korea, 2023)
<i>Fusarium graminearum</i>	HJ40	Barley (Gyeongju, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ41	Wheat (Uiryeong, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ42	Wheat (Uiryeong, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ43	Wheat (Jinju, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ44	Barley (Jinju, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ45	Wheat (Uiryeong, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ46	Wheat (Uiryeong, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ47	Wheat (Uiryeong, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ48	Wheat (Uiryeong, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ49	Barley (Jinju, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ50	Wheat (Iksan, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ51	Wheat (Yeongam, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ52	Wheat (Haenam, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ53	Barley (Haenam, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ54	Barley (Gangjin, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ55	Wheat (Jangheung, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ56	Barley (Goseong, Republic of Korea, 2023)
<i>Fusarium graminearum</i>	HJ57	Barley (Goseong, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ58	Barley (Jinju, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ59	Barley (Miryang, Republic of Korea, 2023)
<i>Fusarium asiaticum</i>	HJ60	Barley (Miryang, Republic of Korea, 2023)



Supplementary Fig. 1. Growth of *Fusarium* spp. on BGT (*Burkholderia glumae* Toxoflavin) medium. This series of photographs shows the growth of *Fusarium* spp. on BGT after a 3-day incubation at 25°C. Surface-sterilized seeds were placed onto the BGT plates, and the development of *Fusarium* colonies was monitored. The numbers below each plate indicate the count of *Fusarium* colonies observed. The progressive increase in colony numbers from images 1 through 5 demonstrates the isolation frequency of *Fusarium* strains from the inoculated seeds.