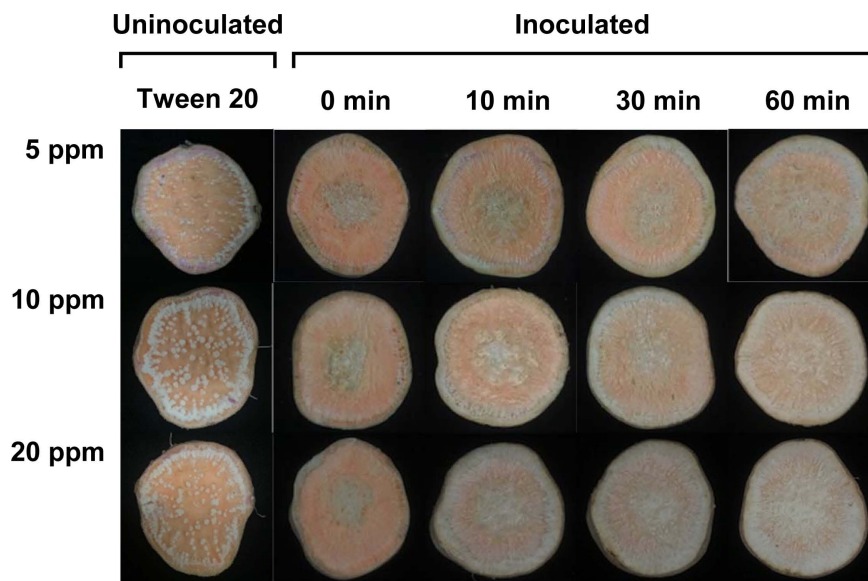


Supplementary Fig. 1. Neighbor-joining tree that shows the relationships between isolate SP-f6 (MK212928) and other members of the genus *Fusarium*, based on phylogenetic analyses of ITS1-5.8S-ITS2 region sequences. Filled circles on the branches indicate that the nodes were also recovered in the tree constructed by the maximum-likelihood algorithm. *Microdochium nivale* var. *majus* CBS 177.29 (MH855031) were used as outgroups (not shown). Scale bar, 2 nt substitution per 100 nt of the sequence.



Supplementary Fig. 2. Photographs of sweetpotato (cv. Juwhangmi) slices at 14 days after drop-inoculation with *Fusarium oxysporum* f. sp. *batatas* SP-f6 ($10 \mu\text{l}$ of 5×10^6 spores/ml) following treatment with various ClO_2 concentrations (5, 10, and 20 ppm) for 0, 10, 30, and 60 min.

Supplementary Table 1. Analysis of variance components including the degrees of freedom (df), sum of squares (SS), *F* ratio, and *P* value for lesion diameters and fungal populations of *Fusarium oxysporum* f. sp. *batatas* SP-f6 on inoculated slices and surface layers of sweetpotato roots followed by treatment with gaseous chlorine dioxide (ClO_2), respectively

Source of variation	Lesion diameter (mm) ^a								Fungal population (log cfu/g dry weight) ^b							
	Experiment 1				Experiment 2				Experiment 1				Experiment 2			
	df	SS	<i>F</i>	<i>P</i>	df	SS	<i>F</i>	<i>P</i>	df	SS	<i>F</i>	<i>P</i>	df	SS	<i>F</i>	<i>P</i>
Concentration	2	63.4	3.3	0.0534	2	44.5	8.9	0.0013	1	0.8	48.1	<0.0001	1	0	1.4	0.2574
Time	3	63.7	2.2	0.1114	3	108.7	14.5	<0.0001	2	2.3	73.1	<0.0001	2	0.9	20.9	0.0003
Concentration × Time	6	16	0.3	0.9415	6	28.1	1.9	0.1258	2	1	29.4	0.0002	2	0	0.2	0.7999

^aSweetpotato slices were drop-inoculated with $10 \mu\text{l}$ of spore suspension (5×10^6 spores/ml) of isolate SP-f6. They were then treated with various ClO_2 concentrations (5, 10, and 20 ppm) for 0, 10, 30, and 60 min. Lesion diameters were assessed 14 days after incubation at 28°C .

^bSweetpotato roots were dipped in spore suspension (5×10^6 spores/ml) of isolate SP-f6 for 10 min and treated with different ClO_2 concentrations (20 and 40 ppm) for 0, 30, and 60 min. After ClO_2 gas treatment, colony-forming units (CFUs) on the surface layers of the roots were determined.