Journal of Plant Protection Research eISSN 1899-007X

ORIGINAL ARTICLE

Field survey of Fusarium stem rot of lisianthus (*Eustoma grandiflorum*) cultivated in Okinawa, Japan

Takashi Hanagasaki[1]*, Atsushi Ajitomi[1], Emi Miwa[2], Tomohiko Kiyuna[2]

[1] Okinawa Agricultural Research Center, Okinawa, Japan
[2] TechnoSuruga Laboratory Co. Ltd, Shizuoka, Japan

Vol. 63, No. 3: 280–285, 2023

DOI: 10.24425/jppr.2023.146872

Received: February 02, 2023
Accepted: April 18, 2023
Online publication: September 04, 2023

*Corresponding address:
hangskit@pref.okinawa.lg.jp;
hangskit@yahoo.co.jp

Responsible Editor:
Ewa Moliszewska

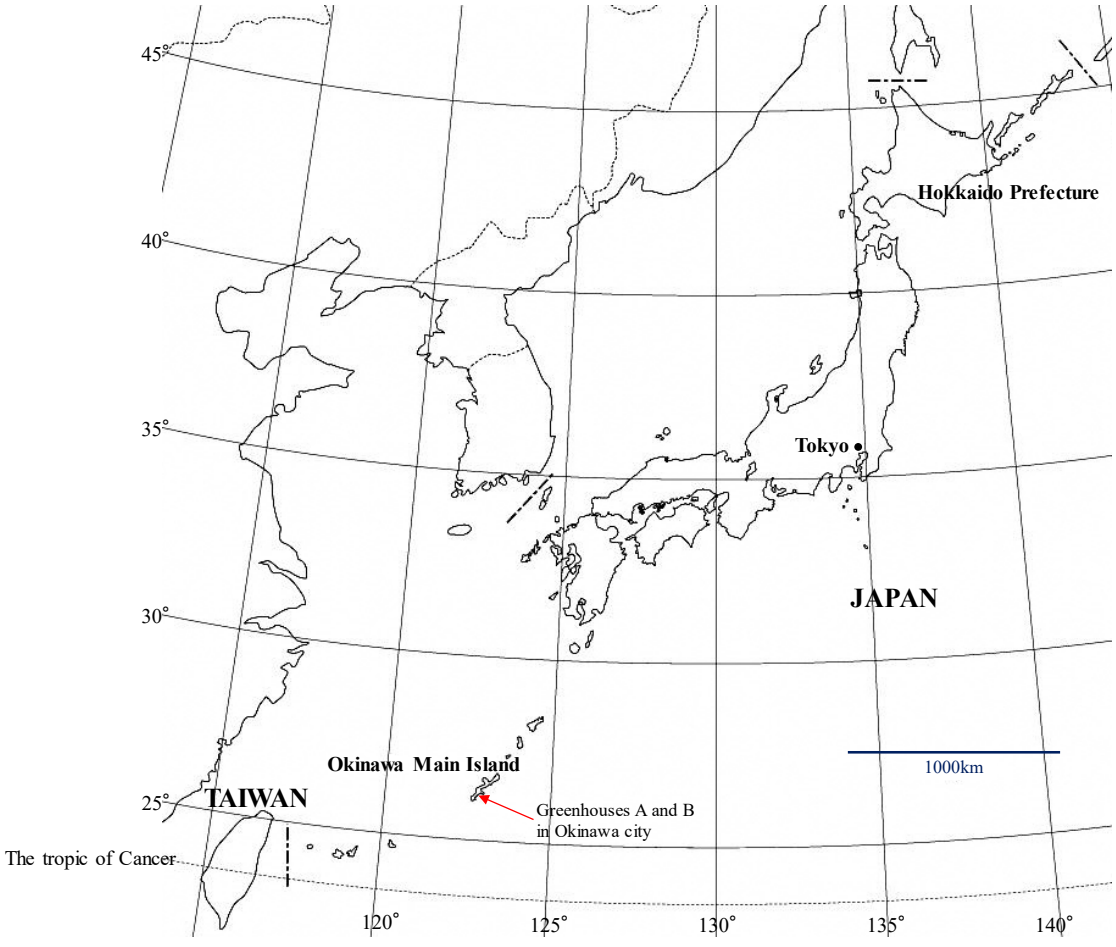
SUPPLEMENTARY MATERIAL

The authors are fully responsible for both the content and the formal aspects of the supplementary material. No editorial adjustments were made.

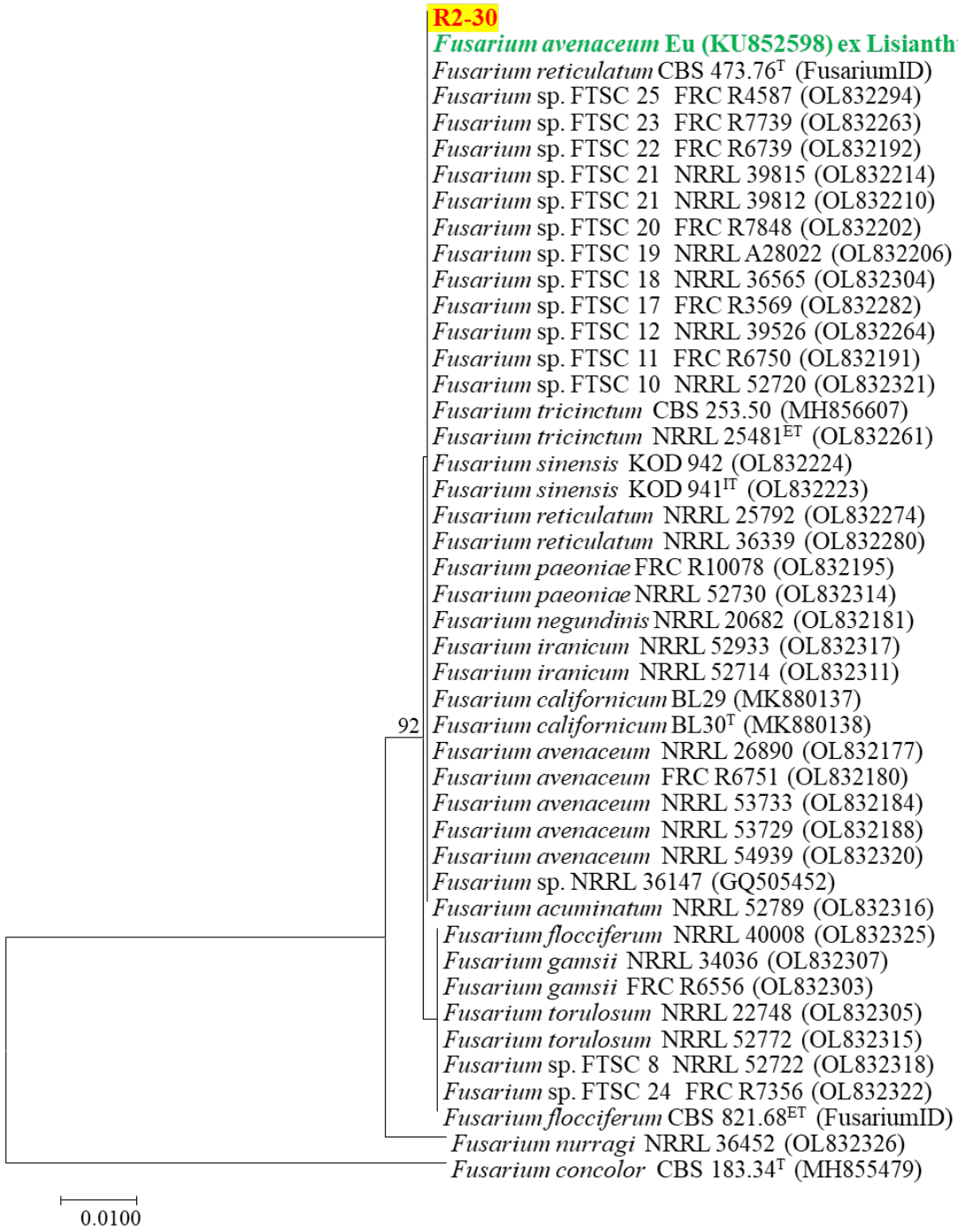
Supplementary Table 1. PCR Primers information of PCR amplification of the four loci

Locus	Primers	Sequence of primer (5′→3′)	Direction	References
ITS	ITS5	GGAAGTAAAAGTCGTAACAAG	forward	White *et al*. (1990)
	ITS4	TCCTCCGCTTATTGATATGC	reverse	
	NL4 [a]	GGTCCGTGTTTCAAGACGG	reverse	O'Donnell (1993)
tef1	EF1	ATGGGTAAGGARGACAAGAC	forward	O'Donnell *et al*. (1998)
	EF2	GGARGTACCAGTSATCATGTT	reverse	
rpb1	Fa	CAYAARGARTCYATGATGGGWC	forward	O'Donnell *et al*. (2010)
	R8	CAATGAGACCTTCTCGACCAGC	reverse	
	F7	CRACACAGAAGAGTTTGAAGG	forward	
	R9	TCARGCCCATGCGAGAGTTGTC	reverse	
	F6 [a]	CTGCTGGTGGTATCATTCACG	forward	
	F8 [a]	TTCTTCCACGCCATGGCTGGTCG	forward	
	G2R [a]	GTCATYTGDGTDGCDGGYTCDCC	reverse	
	Amp3f	GAYTACATCTTCAAYCGTCAGCC	forward	Senatore *et al*. (2021)
	Amp3r	GTTCTTGGAHGACACACCRGCG	reverse	
rpb2	RPB2-5f2	GGGGWGAYCAGAAGAAGGC	forward	Reeb *et al*. (2004)
	fRPB2-7cr	CCCATRGCTTGYTTRCCCAT	reverse	
	fRPB2-7cf	ATGGGYAARCAAGCYATGGG	forward	Liu *et al*. (1999)
	RPB2-11ar	GCRTGGATCTTRTCRTCSACC	reverse	

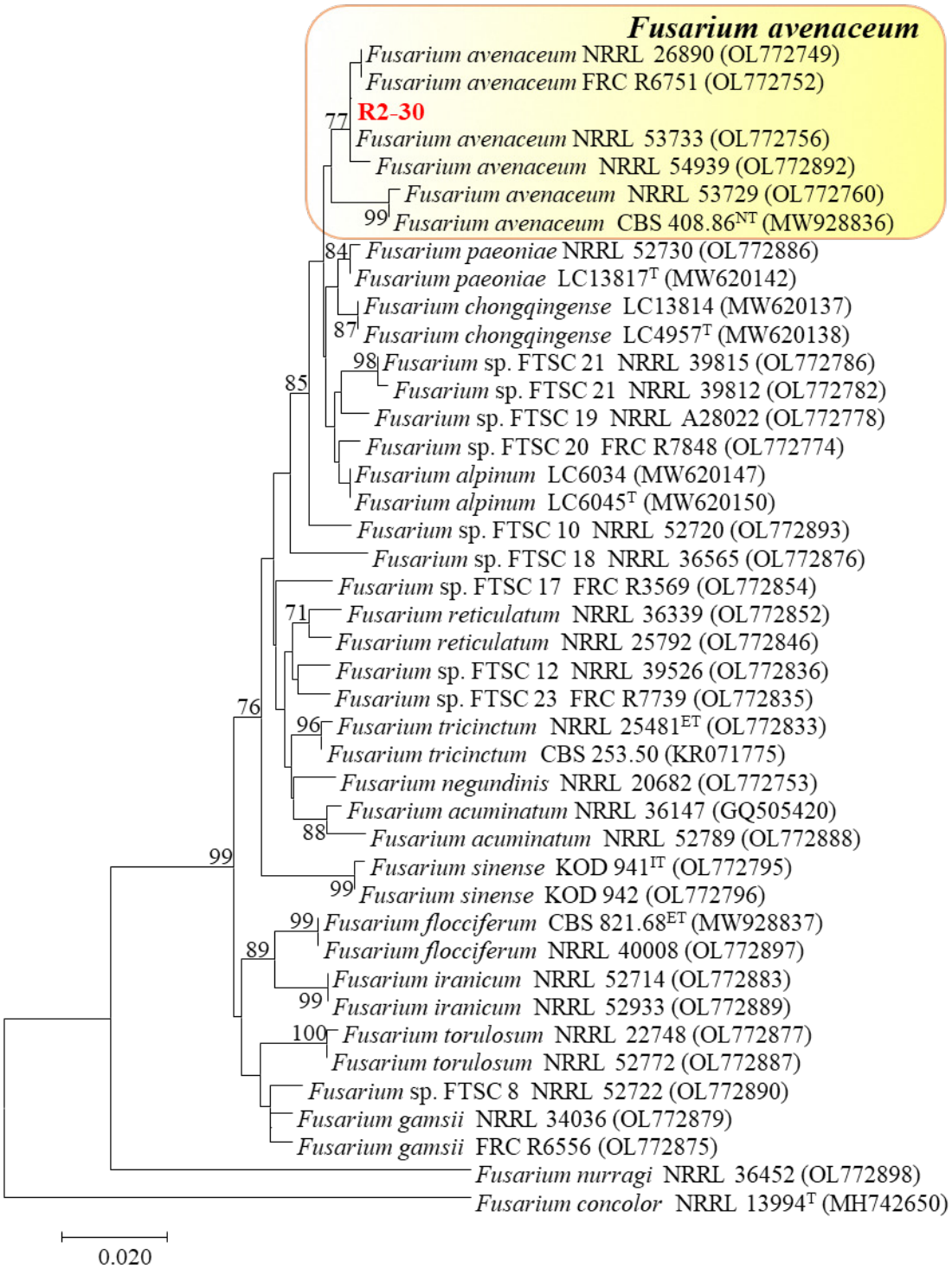
[a]used only for sequencing reactions



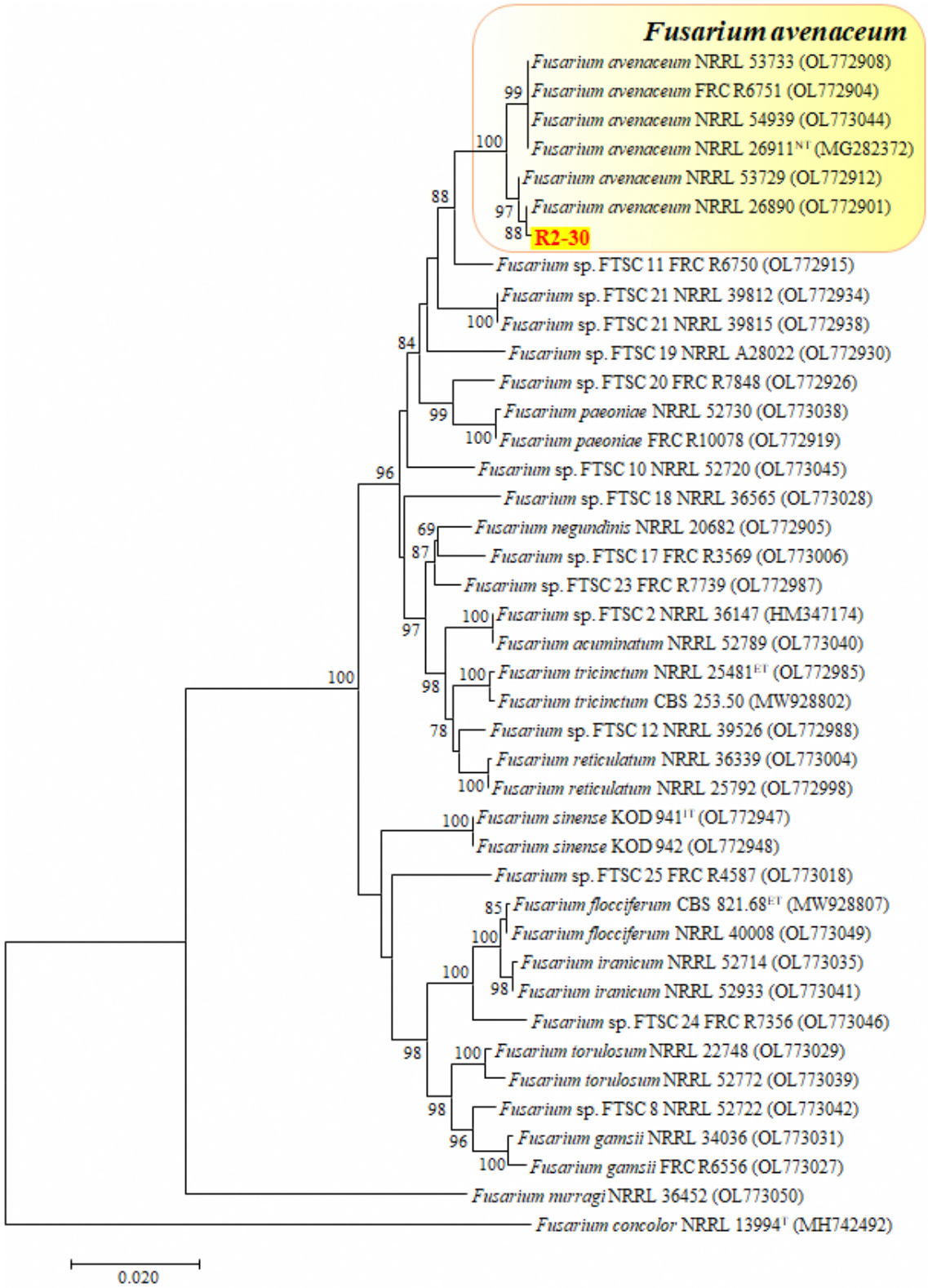
Supplementary Figure 1. Map of Okinawa, indicating the localizations of the greenhouses



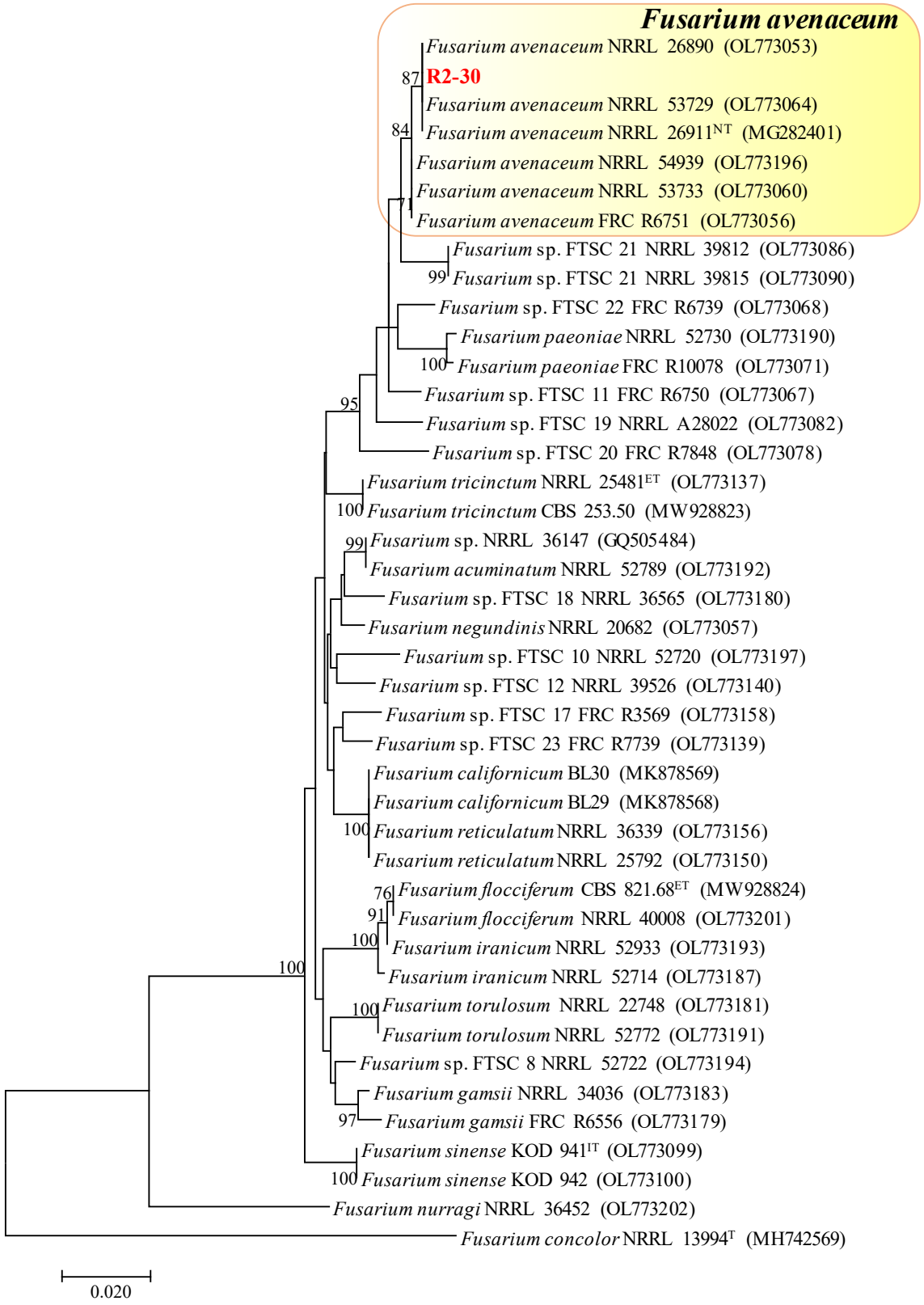
Supplementary Figure 2. Neighbor-Joining (NJ) phylogeny inferred from ITS sequences of R2-30, one strain from lisianthus, and species of *Fusarium tricinctum* species complex. Numbers on the nodes are NJ Bootstrap values above 70%



Supplementary Figure 3. Neighbor-Joining (NJ) phylogeny inferred from *tef1* sequences of R2-30 and species of *Fusarium tricinctum* species complex. Numbers on the nodes are NJ Bootstrap values above 70%



Supplementary Figure 4. Neighbor-Joining (NJ) phylogeny inferred from *rpb1* sequences of R2-30 and species of *Fusarium tricinctum* species complex. Numbers on the nodes are NJ Bootstrap values above 70%



Supplementary Figure 5. Neighbor-Joining (NJ) phylogeny inferred from *rpb2* sequences of R2-30 and species of *Fusarium tricinctum* species complex. Numbers on the nodes are NJ Bootstrap values above 70%