

()

Verticillium dahliae
Meloidogyne javanica

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(/ / : // :)

+

()

$(p \leq /)$

+

+

%

+

$(p \leq /)$

مقدمه

(Rengel *et al.*, 1994; Ogallo & Mc Clure, 1995;
Ryals *et al.*, 1996)
)
(
(Zainol *et al.*, 2003)

(Oka *et al.*, 1997) SA
(Hammand-Kosack & SA
Jones, 1998)
(1995) Buffa *et al.*
(cholera) SA
(1997) Mandavia *et al.*
Fusarium oxysporum f.sp. *ciceri*
(Padwick) Sen Gupta and Chattopadhyay
(Manzanilla) (Koroneiki)
(Bellini, 2002)
(Tous & Ferguson, 1997)
(Di Pietro & Roncero,
.1996)
(1998) Valette *et al.*
Verticillium dahliae
Meloidogyne javanica (Treub) Klebahn
Chitwood
Radopholus similis (Cobb) Thorne
V. dahliae
) *V. dahliae* (dopamine)
(SS-4
(SA)
%
PDA SA

(1992) Hilloks

PDA

(Bhat & Subbarao, 1999; Khan *et al.*, 2000)

×

×

(Hall & Ly, 1972; Devay *et al.*, 1973)

) (propagule)

×

(

()

/

)

(Khan *et al.*,

×

.2000)

(

M. javanica

(Dhingra & Sinclair, 1986; Khan *et al.*,

M. javanica

.2000)

V. dahliae

)

De Grisse

)

(

(1969)

PDA

(

(Seervers *et al.*, 1971) *M. javanica*
M. javanica
Eisenbeck & Triantaphyllou (1987) Jepson (1991)
(Etebarian, 1989) /
/ (single egg mass)
(Rutgers)
(1973) Hussey & Barker
(Spectronic-501) %
(Etebarian, 1989; Seervers *et al.*, 1971) ()
(Seervers *et al.*, 1971; Etebarian, 1989) /
% ×
(Lamberti & Baines, 1969; Hussey & Barker, 1973; Sasanelli *et al.*, 1997)
/ (1971) Seervers *et al.*
%
%
Beckman-J2-Mc
[(g=1.127 (rpm/1000) 2]

$$(\quad) +$$

$$W = 32b (x-x')$$

$$.(p \leq /)$$

=W

$$(\quad) +$$

=b

%

=x

+

=x'

$$(\quad)$$

$$(p \leq /)$$

V. dahliae

M. javanica

$$+ (\quad) + (\quad) + (\quad)$$

$$(p \leq /) (\quad)$$

$$.(\quad)$$

$$.(\quad)$$

$$(\quad) :$$

$$.(\quad) (\quad)$$

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(Etebarian, 1989; Valette *et al.*, 1998; Lozovaya *et al.*, 2006; Funnell & Pedersen, 2006; Shokouhi *et al.*, 2006; Sahebani *et al.*, 2007)

(Sari *et al.*, 2007;

(Rahdari 2008)

& Khavari-Nejad, 2006)

M. javanica

V. dahliae

(Mignonette)

(All year)

()

M. javanica *V. dahliae*

()

/ wx	/ x	/ r	/ abcd	
/ c	/ d	/ e	/ ab	
/ d	/ f	/ h	/ a	
/ a	/ a	/ a	/ bcd	+
/ f	/ h	/ k	/ abcd	
/ b	/ c	/ d	/ cd	+
/ g	/ j	/ mn	/ abcd	
/ a	/ b	/ f	/ abc	+
/ x	/ x	/ s	/ cd	
/ r	/ p	/ kl	/ cd	
/ u	/ s	/ o	/ cd	
/ p	/ l	/ g	/ bcd	+
/ v	/ u	/ p	/ cd	
/ q	/ n	/ i	/ abcd	+
/ w	/ v	/ q	/ cd	
/ s	/ q	/ l	/ bcd	+
/ w	/ w	/ r	/ cd	
/ g	/ g	/ fg	/ abcd	
/ i	/ i	/ j	/ d	
/ e	/ d	/ b	/ d	+
/ j	/ k	/ kl	/ cd	
/ j	/ e	/ c	/ abcd	+
/ l	/ m	/ m	/ bcd	
/ h	/ h	/ h	/ cd	+
/ w	/ x	/ s	/ cd	
/ n	/ no	/ j	/ abcd	
/ o	/ o	/ k	/ cd	
/ m	/ ij	/ d	/ d	+
/ r	/ r	/ no	/ d	
/ k	/ k	/ h	/ cd	+
/ t	/ t	/ p	/ d	
/ r	/ r	/ no	/ cd	+

%

($p \leq /$)

(Dehghani *et al.*, 2001) ($p \leq /$)

() +

(Bellini, 2002)

()

(Tous & Ferguson, 1997)

()

(Saeedizadeh *et al.*, 2003)

+

(Seah *et al.*, 1996; Mandavia *et al.*,

1997; Matern & Kneusal, 1998; Dehghani *et al.*,
2001; Gogoi *et al.*, 2001; Janda *et al.*, 2003; He &

Wolyn, 2005)

M. javanica

V. dahliae

(Saeedizadeh *et al.*, 2003)

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