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### *Cryphonectria parasitica*

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#### *Cryphonectria parasitica*

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M1297 (MAT-1) M1115 (MAT-2)

#### *Castanea sativa*

MAT-2 MAT-1

% /

(% / )

% /

MAT :

.Heiniger, 2001)

(avirulence)

(*Castanea sativa* Miller)

(Ghezi *et al.*,

.(Bissegger *et al.*, 1997)

.2009)

*Cryphonectria parasitica* (Murill)

Barr

*C. parasitica*

(hypovirulent)

(Anagnostakis, 1987; Robin &

*C. parasitica*

*C. parasitica*

(Glass & Kuldau, 1992)

MAT-1) ( ) (MAT)

(MAT-2

)

( ) (

*C. parasitica*

MAT

(Marra & Milgroom, 2001)

*C. parasitica*

(Milgroom *et al.*, MAT-2 MAT-1

.1993; McGuire *et al.*, 2004)

% / )

(%

MAT

(PDA) + +

(Shiu & Glass, 2000; Souza *et al.*,

$\pm$  ° C

.2003)

:

%

PDA

(Kronstad & Staben, 1997; Giraud *et al.*,

.2008)

*C. parasitica*

M1297

(Bissegger *et al.*, 1997)

:

(MAT-2) M1115 (MAT-1)

:

*Castanea sativa*

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M1095

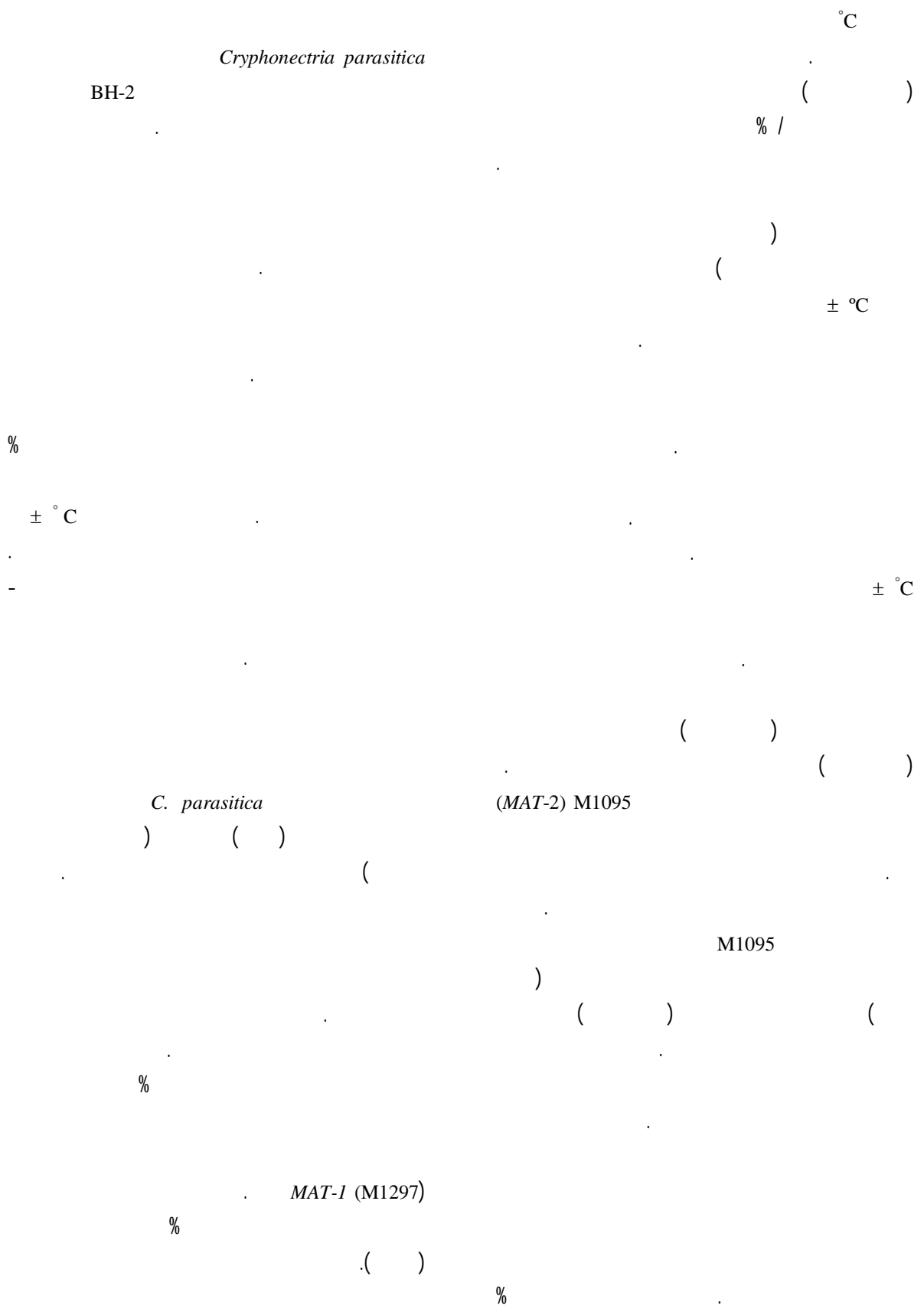
(

(1997) Bissegger *et al.* (2006) Rigling

*C. sativa*

(Sotirovski *et al.*, 2004; Montenegro *et al.*, 2008)

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( ) ( )  
% /

% /                      %  
% /

M1095 (MAT-2)

( )

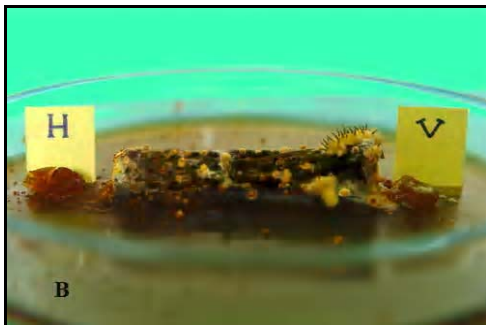
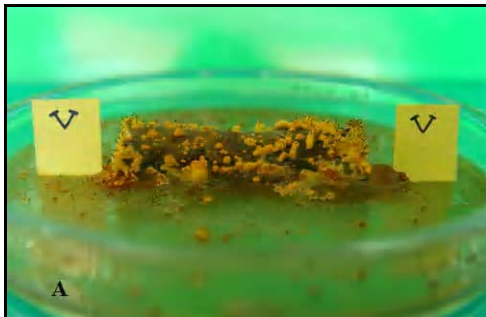
MAT-1

MAT-2

MAT-2

MAT-1

MAT-1



*Cryphonectria parasitica*

( )  
( ) *C. parasitica* ( )

*Cryphonectria parasitica*

(V) *Cryphonectria parasitica*  
(A) (MAT-2 MAT-1)

(H) M1095 (V) (B)

MAT-1  
MAT-2  
MAT-1, MAT-2\*  
\*\*

\*

\*\*

*C. parasitica*

| (Ba)  |       | (Ta)   | (Vi) | (Do)  |        |
|-------|-------|--------|------|-------|--------|
| MAT-2 | MAT-1 |        |      | MAT-2 | MAT-1  |
| +     |       | Vi4-2  | +    | +     | Do-1-1 |
| +     |       | Vi6-1  |      | +     | Do2-2  |
| +     |       | Vi6-2  |      | +     | Do2-3  |
| +     |       | Vi6-3  | +    |       | Do3-3  |
| +     |       | Vi7    | +    | +     | Do6    |
|       | +     | Vi8-1  | +    |       | Do7    |
|       |       | Vi8-2  |      | +     | Do8-1  |
|       |       | Vi9-1  | +    |       | Do8-3  |
| +     |       | Vi9-2  |      | +     | Do9    |
| +     |       | Vi9-3  |      | +     | Do10-3 |
| +     |       | Vi9-4  |      | +     | Do14   |
| +     |       | Ta1    |      |       | Do16-2 |
|       |       | Ta3-2  |      |       | Do18-2 |
|       |       | Ta5-2  |      | +     | Do19   |
|       |       | Ta16-1 |      | +     | Do21-1 |
|       | +     | Ta19   | +    |       | Do23-2 |
| +     |       | Ta21-1 | +    |       | Do24-2 |
| +     | -     | Ta23   |      | +     | Do25   |
| +     | +     | Ta25-2 |      | +     | Do26-2 |
| +     |       | Ba5-1  |      |       | Do28-2 |
| +     |       | Ba5-2  |      |       | Vi1-1  |
| +     |       | Ba8-2  | +    |       | Vi1-2  |
|       | +     | Ba10   |      |       | Vi1-3  |
|       | +     | Ba11   | +    |       | Vi2    |
| -     | +     | Ba13   | +    |       | Vi3-1  |
|       |       | Ba14   | +    | +     | Vi3-2  |
| +     | -     | Ba15-2 |      | +     | Vi4-1  |

*C. parasitica*

| ( $\mu\text{m}$ ) ( | $\pm$ SE) |
|---------------------|-----------|
| $\pm$               | $\pm$     |
| $\pm$               | $\pm$     |
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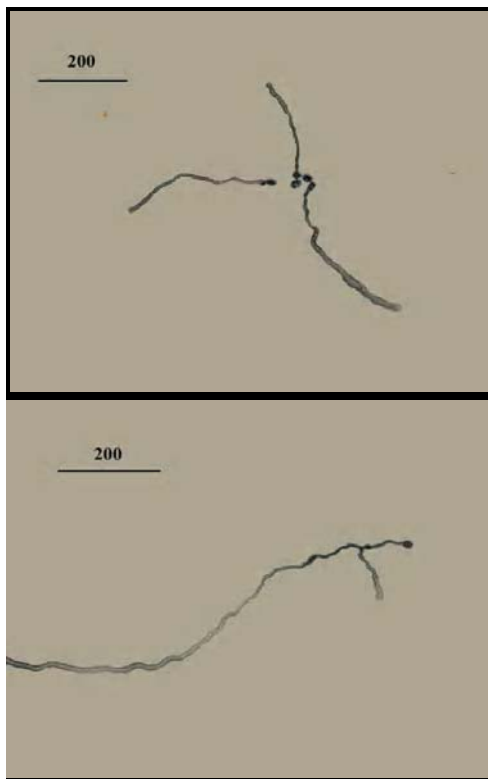
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*Cryphonectria*

*parasitica*



*Cryphonectria parasitica*

*C. parasitica*

(MAT-2) MAT-1  
M1095  
MAT-1 ( )  
( )  
MAT-2  
*C. parasitica*

(Elliston, 1985; Zhang *et al.*, 1993)

%  
(EU-12)  
MAT-1  
(Sotirovski *et al.*, 2004)

% /  
(1997) Bissegger *et al.*  
*C. parasitica*

( )  
*C. parasitica*  
(MAT-1)  
(Perlerou & Diamandis, 2006; Montenegro  
*et al.*, 2008)  
(2008) Mehdinejad

(2001) Marra & Milgroom .  
*C. parasitica*  
vic  
*C. parasitica*  
(Ghezi *et al.*, 2009)  
*C. parasitica*

*C. parasitica*

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(

(2008) Mehdinejad

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