



2009. 10.

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TEL (031)449-0524

- 2
- - EU()
- 13
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- 28
- Ascospora dieback [Cirsium arvense (L.) Scop.]
 Seimatosporium lichenicola
- 36
-
- 45
- 51
- “ 1 ”
- 「 」
- 「 」
-
- 2
- 65
- *Nectria haematococca*
- Q & A 70
- 82
- 가 ?
- 86
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- 107
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- 가 116
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: 397 5000km²

: 4 9 (2008)

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가

35%가

Parties) 가
(Panels of experts)
가 (NPPOs
: National Plant Protection
Organizations)

- EPPO

: Albania, Algeria, Austria,
Azerbaijan, Belarus, Belgium,
Bosnia and Herzegovina, Bulgaria,
Croatia, Cyprus, Czechia, Denmark,
Estonia, Finland, France, Germany,
Greece, Guernsey, Hungary,
Ireland, Israel, Italy, Jersey,
Jordan, Kazakhstan, Kyrgyzstan,
Latvia, Lithuania, Luxembourg,
Macedonia, Malta, Moldova,
Morocco, Netherlands, Norway,
Poland, Portugal, Romania, Russia,
Serbia, Slovakia, Slovenia, Spain,
Sweden, Switzerland, Tunisia,
Turkey, UK, Ukraine, Uzbekistan

- EPPO : (Chairman: R.
Arnitis), (C. Carvalho),
(Belarus, Denmark, Kazakhstan,
Morocco, Poland, Slovenia, Turkey),
(: N. van Opstal, : F.
Petter)

또 (Council)

- EPPO
EPPO 1 1 (9)
EPPO

3

또 (Executive Committee)

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- (2008 9)

또 가 (Working Parties)
(Panels of Experts)

- EPPO
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1 2 (5 , 7) EPPO

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☞ EPPO (EPPO Secretariat)

- EPPO , 가 .
- EPPO

| | |
|--------------------------------|------------------------|
| Director-General | Nico van Opstal |
| Assistant Director | Francoise Petter |
| Scientific Officer | Vlasta Zlof |
| Scientific Officer | Andrei Orłinski |
| Information Officer | Anne-Sophie Roy |
| Scientific Officer | Muriel Suffert |
| Scientific Officer | Sarah Brunel |
| Scientific Officer | Robert Sunley |
| Information Technology Officer | Damien Griessinger |
| Assistant Editor | Madeleine McMullen |
| Administrator | Eliane Madene |
| Secretary | Marie-Christine Ozanon |
| Secretary | Jocelyne Karquel |

- ☞ - : Budget
- : Food Safety
Animal Plant Health checks,
Contamination, LMO
- : EC Council Regulation :
1994. 12. 22.

EC
2000/29/EC)

(Directive

:

- 29 Annex ~

- Annex : (Harmful
Organism)

A , 16.2. :

(a)

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가

- Annex :

- Annex :

- Annex :

(b)

(

(c)

吒

Sodium Orthophenylphenate

1)

A , 16.3.

: *Cercospora angolensis*

(a)

Cercospora angolensis

가

2)

(b)

Cercospora angolensis

2

(c)

Cercospora angolensis

1)

Cercospora angolensis



A , 16.4.

: *Guignardia citricarpa*

(a) *Guignardia citricarpa*()

가 ,

(b) *Guignardia citricarpa*()

,

(c) *Guignardia citricarpa*

,
Guignardia citricarpa()

(d) *Guignardia citricarpa*()

Guignardia citricarpa()

A , 16.5. :

(a) Tephritidae()

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(b) Tephritidae

3

가

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Tephritidae

(c)

Tephritidae가

(d)

㉠ . . :

(a) *Monilinia fructicola*가
가

(b) *Monilinia fructicola*가

(c) *Monilinia fructicola*

㉠ :

A , 48. :

Clavibacter michiganensis subsp. *michiganensis*, *Xanthomonas campestris* pv. *vesicatoria* Potato spindle tuber viroid

(a) *Clavibacter michiganensis* subsp. *michiganensis*, *Xanthomonas campestris* pv. *vesicatoria* Potato spindle tuber viroid가

(b) *Clavibacter michiganensis* subsp. *michiganensis*, *Xanthomonas campestris* pv. *vesicatoria* Potato spindle tuber viroid

(c) *Clavibacter michiganensis* subsp. *michiganensis*, *Xanthomonas campestris* pv. *vesicatoria* Potato spindle tuber viroid

A ,32.2. : (*Liriomyza sativae*) *Amauromyza maculosa*

(a) (*Liriomyza sativae*) *Amauromyza maculosa*가 가

(b) (*Liriomyza sativae*) *Amauromyza maculosa*가

EU-Decision 2004/200 /EG, : Pepino mosaic virus

1a) Pepino mosaic virus가

1b) Pepino mosaic virus

1c) Pepino mosaic virus

A ,27.2. : *Spodoptera eridania*, *Spodoptera frugiperda*, *Spodoptera litura*

(a) *Spodoptera eridania*, *Spodoptera frugiperda*, *Spodoptera litura* ()

(b) *Spodoptera eridania*, *Spodoptera frugiperda*, *Spodoptera litura* () 가

mosaic virus

Pepino

㉠ :

㉠ :

A , 45.2. : 가

(a) 가 ()가 가

(b) 가 가 ()가

㉠ :

A ,36.2. : (*Thrips palmi*)

(a) (*Thrips palmi*)가 가

(b) 가

㉠ :

A ,32.2. : (Liriomyza sativae) Amauromyza maculosa

(a) (Liriomyza sativae) Amauromyza maculosa가

(b) (Liriomyza sativae) Amauromyza maculosa가

A ,27.2. : Spodoptera eridania, Spodoptera frugiperda, Spodoptera litura

(a) Spodoptera eridania, Spodoptera frugiperda, Spodoptera litura ()

(b) Spodoptera eridania, Spodoptera frugiperda, Spodoptera litura ()

: EU (2009-12)

: , , 가

, , 가

A ,33. : 가

(a) Clavibacter michiganensis subsp. sependoniscus (Spieckermann and Kotthoff) Davis et al., Globodera pallida (Stone) Behrens, Globodera rostochiensis (Wollenweber) Behrens, Synchytrium endobioticum (Schilbersky) percival

: .

A ,27.1. : Heliothis armigera, Spodoptera littoralis

(a) Heliothis armigera Hubner Spodoptera littoralis (Boisd.)

(b) Heliothis armigera Hubner Spodoptera littoralis (Boisd.)

가 .

A ,27.2. : Spodoptera eridania, Spodoptera frugiperda, Spodoptera litura

(a) Spodoptera eridania, Spodoptera frugiperda, Spodoptera litura ()

(b) *Spodoptera eridania*, *Spodoptera frugiperda*, *Spodoptera litura* () 가 .

A ,29.
: *Erwinia chrysanthemi* pv. *dianthicola*, *Pseudomonas caryophylli*, *Phialophora cinerescens*

(a) 2 1
Erwinia chrysanthemi pv. *dianthicola* (Hellmers) Dickey, *Pseudomonas caryophylli* (Burkholder) Starr and Burkholder, *Phialophora cinerescens* (Wollenw.) Van Beyma가

(b)

ㄹ

A ,27.1. : *Heliothis armigera*, *Spodoptera littoralis*

(a) *Heliothis armigera* Hubner *Spodoptera littoralis* (Boisd.)

(b) *Heliothis armigera* Hubner *Spodoptera littoralis* (Boisd.) 가 .

A ,27.2.

: *Spodoptera eridania*, *Spodoptera frugiperda*, *Spodoptera litura*

(a) *Spodoptera eridania*, *Spodoptera frugiperda*, *Spodoptera litura* ()

(b) *Spodoptera eridania*, *Spodoptera frugiperda*, *Spodoptera litura*() 가 .

A ,28.

: *Spodoptera eridania*, *Spodoptera frugiperda*, *Spodoptera litura*

(a) Chrysanthemum stunt virid가 3 10% Chrysanthemum stunt virid가

(b) 3 1 *Puccinia horiana* Hennings 3 *Puccinia horiana* Hennings

- *Puccinia horiana* Hennings

(c) 가

Didymella ligulicola (Baker,
Dimock and Davis) v. Arx

, 가

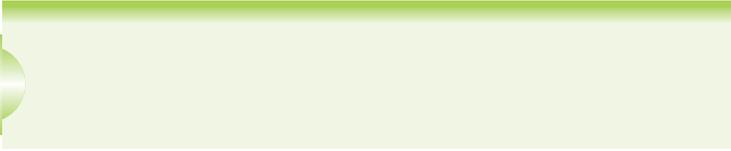
Didymella ligulicola
(Baker, Dimock and Davis) v. Arx

A ,30. : *Ditylenchus dipsaci*

(a) 1 *Ditylenchus dipsaci*
(Kuhn) Filipjev

ㄷ :





(<http://www.npqqs.go.kr/>)

&

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가 2009. 8. 21

- “ (3) ”
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- 1. ,
- 2. ,
- 3. ,
- 4. ,
- 5. ,
- 6. ,
- 7. (Pinus spp.)
(Larix spp.)
- 8. ,
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- 10. ,
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- 12. ,
- 13. ,
- 14. ,
- 15. () ,
- 16. , ,

(2009-36)

6 8 1 ()

가 2 () 2012 9 25

39 가 가 “ 「 248) ” 7 3

2009-27 「

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: 39 (9, 30)

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|----|-------|--|--|
| 1 | (9) | <i>Asperisporium caricae</i> | |
| 2 | | <i>Botryodiplodia caricae</i> | |
| 3 | | <i>Cercospora papayae</i> | |
| 4 | | <i>Mycosphaerella caricae</i> | |
| 5 | | <i>Oidium caricae - papayae</i> | |
| 6 | | <i>Ovulariopsis caricae</i> | |
| 7 | | <i>Phyllactinia papayae</i> | |
| 8 | | Papaya leaf curl virus | |
| 9 | | Tomato torrado virus | |
| 10 | (30) | <i>Coptotermes sjostedti</i> Holmgren | |
| 11 | | <i>Paratetrix mexicanus</i> (Saussure) | |
| 12 | | <i>Fulvius dimidiatus</i> Poppius | |
| 13 | | <i>Aphis ruborum</i> (Börner) | |

| | | () | |
|----|--|--|--|
| 14 | | <i>Dialeurodes kirkaldyi</i> (Kotinsky) | |
| 15 | | <i>Pealius mori</i> (Takahashi) | |
| 16 | | <i>Singhiella simplex</i> (Singh) | |
| 17 | | <i>Malanaspis rhizophorae</i> (Cockerell) | |
| 18 | | <i>Ectinus minimus</i> Platia | |
| 19 | | <i>Anthrenocerus australis</i> (Hope) | |
| 20 | | <i>sinoxylon crassum</i> Lesne | |
| 21 | | <i>Prometopia quadrimaculata</i> Motschulsky | |
| 22 | | <i>Cathartosilvanus opaculus</i> (LeConte) | |
| 23 | | <i>Atomaria curtula</i> Casey | |
| 24 | | <i>Litargus balteatus</i> LeConte | |
| 25 | | <i>Enaphalodes rufulus</i> (Haldeman) | |
| 26 | | <i>Megacyllene caryae</i> (Gahan) | |
| 27 | | <i>Neoclytus rufus</i> (Olivier) | |
| 28 | | <i>Lema dilecta</i> Baly | |
| 29 | | <i>Phyllotreta pallidipennis</i> Reitter | |
| 30 | | <i>Conorhynchus conirostris</i> (Gebler) | |
| 31 | | <i>Otiorhynchus singularis</i> (Linnaeus) | |
| 32 | | <i>Pityophthorus juglandis</i> Blackman | |
| 33 | | <i>Torostoma apicale</i> Broun | |
| 34 | | <i>Trachyphloeus bifoveolatus</i> (Beck) | |
| 35 | | <i>Monomorium antarcticum</i> (Smith) | |
| 36 | | <i>Merophyas divulsana</i> (Walker) | |
| 37 | | <i>Cameraria ohridella</i> Deschka & Dimic | |
| 38 | | <i>Aculops fuchsiae</i> Keifer | |
| 39 | | <i>Cernuella virgata</i> (Da Costa) | |

(2009-35)

8

가 .

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'09. 9. 25

(6 ~ 7)

(8 ~ 10)

6%

11

가

149

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(2009-34)

28

36 2 「 가

(2009-17 , 2009. 3. 19.)」

2009 8 20

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"(2009-33)

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2010
(IPPC)

* IPPC : International Plant Protection Convention



가

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26 .

26 . (APPPC) 가 ' 09 8.31 9.4
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가 (水草)

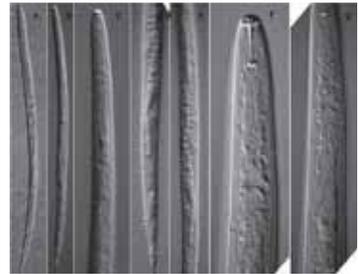
가
(水草) 09.7.27

Anubias

가 (, , ,), (, 가 , ,), (,), (,) .

(水草)

가 가 가



(Maine州) 7

가

09.7.12

가

, 가 , , ,

가 7 25

(www.npqs.go.kr)

12,428

71,246 12,428 (17%)

가 6,321 , 4,500 , 253 , 321
11,571

128 , 177 , 418 857

(*Clavibacter michiganensis* subsp
michiganensis), *Bipolaris cynodontis*()
(*Pseudococcus longispinus*) 가 (*Bemisia tabaci*) *Aphelenchoides* sp.()
가

- Carrot red leaf virus(),
Acarus farris(가) 23

가



가 () 2009.7.12

| | | |
|------------|------------|--------------------------------------|
| | | |
| <p>[]</p> | <p>, 가</p> | <p>[Potato spindle tuber viroid]</p> |

, ()가

16 1 5

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(Grapevine flavescence

doree phytoplasma)

11 1

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| | | |
| | <p>() .</p> | <p>09.7.13</p> |

11 1 1(, ,) 12
 (Anubias 가)

가 () 2009.7.27

| 12. | - | - |
|--------------------------|---------------|--------------------------|
| Indigofera hirsuta · | · | - |
| Pinus eliottii · | - | [Radopholus citrophilus] |
| · · · · · | - | - |
| · · · · · | - | - |
| · · · · · | - | - |
| () | · · · · · | [Radopholus similis] |
| · · · · · Curcuma | · · · · · | - |
| longa · | 가 · · · · · | - |
| · · · · · | - | - |
| Calathea spp. · | · · · · · | - |
| · Dioscorea spp. · | · · · · · | - |
| · Philodendron · Maranta | · · · · · | - |
| · Stromanthe · Ctenonthe | - | · |
| · Persea · Strelitzia · | · · · · · (| - |
| · Rhaps · Heliconia · | · · · · ·) · | - |
| Anubias | · · · · · | - |

11 1

'09.7.23

| <p>VIANA DO CASTELO , BRAGA , VILA REAL</p> | <p>()</p> | <p>() “ ”</p> |
|---|------------|----------------|

가 2009.7.29. WTO

가. 가: 가

: Prunus spp., Malus spp.

(Grapholita molesta)

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| (가) | | |
|---------------------|---|---------|
| (Yucatan) , , , | Rutaceae() · Cuscuta spp. Artocarpus heterophyllus · () | '09.8.9 |

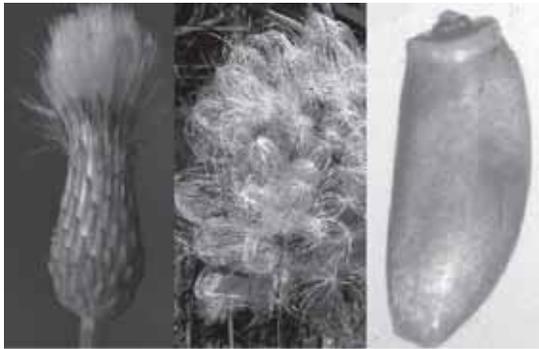
가

(Ceratitis capitata)가 Escondido (2009.9.24
) 가 .

| CA LA (La verne), CA <Mira Mesa , Imperial Beach Escondido (가)> | (, , ,), , , , . |
|---|-----------------------|
| Brooks (Encino) | |



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 “가 ”
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 (, ,)
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 가 가
 가



Ascospora dieback

Seimatosporium lichenicola

National Plant Quarantine Service



nbjeon@npqs.go.kr

- (Teleomorph) *Discostroma fuscellum* (Burk. & Broome)
- (Anamorph) *Seimatosporium lichenicola* (Corda) Shoemaker & E. Muller

Seimatosporium lichenicola

Ascomycota; Pezizomycotina;
Sordariomycetes; Xylariomycetidae;
Xylariales, Amphisphaeriaceae,
Discostroma

ascospores, beak
300 - 500 μm , 200 - 300 μm .
2-5
ostiole . Ostiole
neck periphysis(pl. periphyses)가
(100 - 200 \times 8 - 10 μm)
(11 - 18 \times 5 - 7 μm) 8
5
annelide
periclinal wall 가
3 , 13 - 15 \times 5.5 - 6.5 μm ,

가 , basal ,
 () ,
 (Coelomycete) (1B).
 15.7-20.4 μm, : Primer ITS1, ITS4
 6.0-6.3 μm , 3 , 4-celled, 18S rDNA (597bp)
 , , , NCBI *Discostroma*
 가 (1, *fuscellum* (ana. *Seimatosporium*
 1A). *lichenicola*) .

CTCCGTAGGGGGAACCTGCGGAGGGATCATTACAGAGTTATCTAACTCCC
 AAACCCATGTGAACTTACCATTGTTGCCTCGGCAGAACCTACCCGGTACC
 TACCCTGTAACGACCTACCCTGTAGCGAGTTACCCGGGAACGGCCTACCCT
 GTAGTGCGCTGCCGGTGGACCTCTTAACTCTTGTTATTTTACAGTAATCT
 GAGCGTCTTATTTAATAAGTCAAACCTTTCAACAACGGATCTCTTGGT
 TCTGGCATCGATGAAGAACGCAGCGAAATGCGATACGTAATGTGAATTG
 CAGAATTCAGTGAATCATCGAATCTTTGAACGCACATTGCGCCCATTAGT
 ATTCTAGTGGGCATGCCTGTTCGAGCGTCATTTCAACCCTTAAGCCTAGC
 TTAGTGTTGGGAGCCTACTGTATTGTAGCTCCCCAAATCCAACGGCGGAT
 CTGTGGTATCCTCTGAGCGTAGTAATTTTTATCTCGTTCTGTGAGGTGC
 TGCAGCTCCCAGCCGCTAAACCCCCCAATTTTTAATGGTTGACCTCGGAT
 CAGGTAGGAATACCCGCTGAACTTAAGCATATCAATAGCCCGGAGGAA

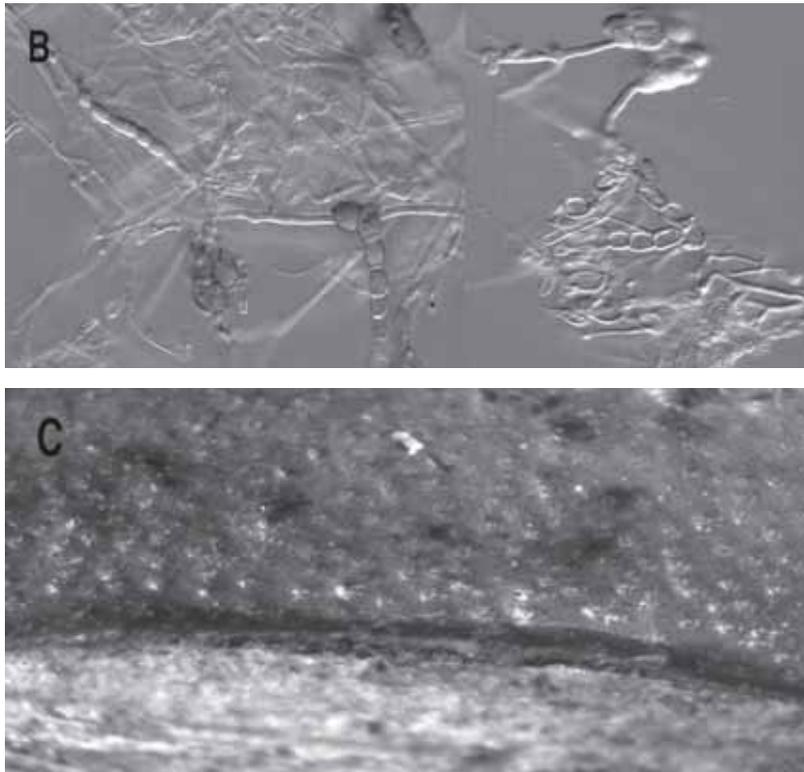
: (, , , , ,), *Vitis*(), *Juniperus*(
 , , , ,), , *Quercus*(), *Ribes*(
 , , , , , ,) *Castanea*()
 , : 가
 : *Ledum*(), *malus*(primocanes,
), *Prunus*(), *Rosa*(
), *Rubus*(), *Vaccinium*(
), *Rhododendron*(), 가
Pyrus(), *Salix*(), Acervuli ,
Cornus(), *Eucalyptus*(가 cane
), *Kerria*(),
Laurus(), *Crataegus*(

node 가 ,
 가 . (Ogawa). S.
lichenicola dieback
Paeonia suffruticosa()
S. botan
 가 *Discostroma botan*
 (1C).
(Prunus dulcis) *S. caudatum* 51
 , 가 가 , 가 ,
 20% 가

1. *Seimatosporium lichenicola*

| Feature | Present isolates | Shoemaker & Muller(1964) |
|----------|------------------------------|------------------------------|
| Anamorph | | |
| Shape | Elliptical, Fusiform-clavate | Elliptical, Fusiform-clavate |
| Septum | 3 | 3 |
| Color | Brown | Brown |
| Size(μm) | 15.7-20.4 × 6.0-6.3μm | 13-15 × 5.5-6.5μm |





1. *S. lichenicola* (A), PDA (B)
(C). Bar=10 μ m

Ellis M. A. et al 1991. Compendium of raspberry and blackberry disease and insects. APS Press. pp12.

Hatakeyama. et al. 2004. A new species of *Discostroma* and its anamorph *Seimatosporium* with two morphological types of conidia, isolated from the stems of *Paeonia suffruticosa*. Mycoscience. Vol. 45(2): 106-111.

Ogawa, J. M., E. E. Wilson., and Harley English. 1991. Diseases of temperate zone tree fruit and nut crops. University of California. p172-173.

Radaitiene D. et al., 2005: *Ascospora dieback* and stem blight, new diseases of *Rubus* species in Lithuania. Botanica Lithuanica, 11(1): 51-53.

Shoemaker. R. A. 1964. *Seimatosporium*(=*Cryptostictis*) parasites of *Rosa*, *Vitis*, and *Cornus*. Can. J. Bot. 42(4): 411-421.

Sutton. B. C. 1980. The Coelomycetes. Commonwealth Mycological Institute. Kew. England. p289-291.

Seimatosporium lichenicola Nomenclature Fact Sheets

Discostroma fuscillum (Berk. & Broome) Huhndorf 1992

- * *Sphaeria fuscilla* Berk. & Broome 1852
- * *Leptosphaeria fuscilla* (Berk. & Broome) Ces. & De Not. 1863
- * *Leptosphaeria fuscilla* var. *fuscilla* (Berk. & Broome) Ces. & De Not. 1863
 - *Metasphaeria cinerea* Sacc. 1883
- * *Leptosphaeria cinerea* (Sacc.) G. Winter 1885
 - *Sphaeria corticola* Fuckel 1870
- * *Discostroma corticola* (Fuckel) I. Brockmann 1976 [1975]
- * *Clethruidium corticola* (Fuckel) Shoemaker & E. M?ll. 1964 Note: as *Clathridium*
- * *Griphosphaeria corticola* (Fuckel) H?hn. 1918
- * *Pleosphaerulina corticola* (Fuckel) Rehm 1912
- * *Leptosphaeria corticola* (Fuckel) Sacc. 1878 Note: A misapplied name.
- * *Metasphaeria corticola* (Fuckel) Sacc. 1883
 - *Sphaeria leiostega* Ellis 1881 Note: Corrected spelling.
- * *Metasphaeria leiostega* (Ellis) Sacc. 1883
- * *Leptosphaeria leiostega* (Ellis) A.G. Eliasson 1896
 - *Sphaerulina salicina* Syd. 1913

Alternate State (Anamorph) : *Sporocadus lichenicola* Corda

Sporocadus lichenicola Corda 1839

- * *Hendersonia lichenicola* (Corda) L?v. 1846 Note: Author and year changed
- * *Seimatosporium lichenicola* (Corda) Shoemaker & E. Muller 1964
- * *Coryneum carbonaceum* Kabat & Bubak 1916

- * *Coryneum corni-asperifoliae* Gonz. Frag. 1817
- * *Hendersonia crataegi* Brenckle 1918 Note: Listed as a synonym by Sutton (1980) but not by Brockmann (1975).
 - *Hendersonia decipiens* Thum. 1876
 - *Coryneum foliicola* Fuckel 1870
- * *Coryneopsis foliicola* (Fuckel) Grove 1932
 - *Hendersonia henriquesiana* Sacc. & Roum. 1884
 - *Coryneum maculicola* Fuckel 1870
 - *Coryneum microstictoides* Sacc. & Penz. 1882
 - *Coryneum microstictoides* subsp. *epilobii* P. Karst. 1888
- * *Coryneum epilobii* (P. Karst.) Oudem. 1923
 - *Coryneum microstictum* Berk. & Broome 1850
- * *Leptocoryneum microstictum* (Berk. & Broome) Petr. 1925
- * *Stilbospora microsticta* (Berk. & Broome) H?hn. 1930
- * *Coryneopsis microsticta* (Berk. & Broome) Grove 1932
 - *Sporocadus rosicola* Rabenh. 1848
 - *Hendersonia rubi* Westend. 1878
- * *Coryneopsis rubi* (Westend.) Grove 1937
 - *Coryneum ruborum* Oudem. 1894
 - *Coryneum trotterianum* C. Massal. 1914

Alternate State (Tel.) : *Discostroma fuscellum*(Berk. & Broome) Huhndorf





가

yong9515@korea.kr

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1.

가.

(1)

(2)

(3)

. 가

(1)

(2)

가

2.

가.

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1.

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(3) 가

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(1) : '08. 7. 7. - 7. 11.(5), 9. 22. - 9. 24.(3)

(가)

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(1) : '08. 10. 13. - 10. 17.(5)

(2) : '08. 10. 18. - 11. 17(1)

(3)

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|--|---|
| | |
| | 가 |
| | 가 |

(1) : '08. 9. 25. - 11. 21.(2)

. PIS

(1) 37

. 가 (11)

(1) 가 . .

. (12)

(1) 130 : 2

1.

가. : 70 670

(1)

가) : 11 , 24 , 175 (57 175)

) : 67

) : 55

) , , : 285

(2) : 100

-
- (1)
- (2)
- (3)
- (4)

-
- (1) : (,), (), , ,
- (2) : , ,
- (3) : , , , , , ,

- : 510
- (1) (374p), (84p), (16p), .
- (16p), (10p), (10p)

2.

가.

Punicaceae ()

【石榴, Pomegranate】

- : *Punica granatum* L.(*P. florida* Salisb., *P. spinosa* Lam.)
- : - -
- : , ,
- :

Rhamnaceae ()

【 , Common Jujube】

● : *Zizyphus jujuba* var. *inermis* (Bunge) Rehder

● : - - -

● : , ,

● :



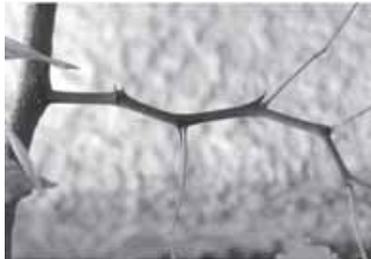
< >



< >



<3 가 >



< >



< 가 >

●

가

2 가 가

가

가

가

3

9-10

(*Z. jujuba*)

가

(*Z. jujuba* var. *hoonensis*)

가

(*Paliurus ramosissimus*)

【Rose Family】

● : Rosaceae()

● : - - - -

● : ,

| | |
|---|-------|
| | |
| () | (,) |
| | , , , |
| Heteromeles arbutifolia, Photinia fraseri, Rosa gymnocarpa 가 | , |

● 1. (Spiraeoideae)

1. 2. 3. 1 (Prunoideae)

3. 10 (Rosoideae)

2. (Pomoideae)



< Spiraea japonica, >



< Prunus salica, >



< Rosa rugosa, >



< Pyrus pirifolia, >



< >

Rosaceae ()

【Rose Subfamily】

: Rosoideae()

: - - - - -

:
:
,

| | |
|--------------------------|-------|
| | |
| () | (,) |
| <i>Rosa gymnocarpa</i> 가 | , |

(Rosa) 가 .

가 가 , 가 .

1 가 .

(Rubus) .

1. .
(*Fragaria*), (*Potentilla*), (*Geum*), (*Filipendula*),
(*Sanguisorba*), (*Agrimonia*), *Waldsteinia*, *Sibbaldia* .
(*Potentilla fruticosa*)

1. .
2. ~ .
3. 가 () (*Rosa*)
3. 가 () ~ (*Rubus*)
2. 가 가 가 (*Kerria japonica*)
2. (*Dryas*), (*Rhodotypos*)

(1) () ()



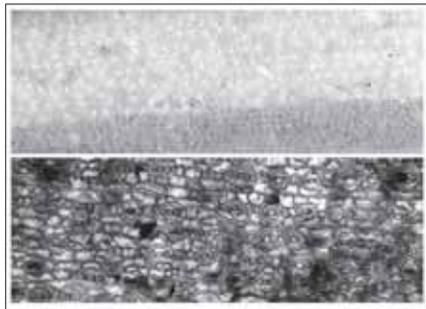
< >



< >



< (,), >



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< () >

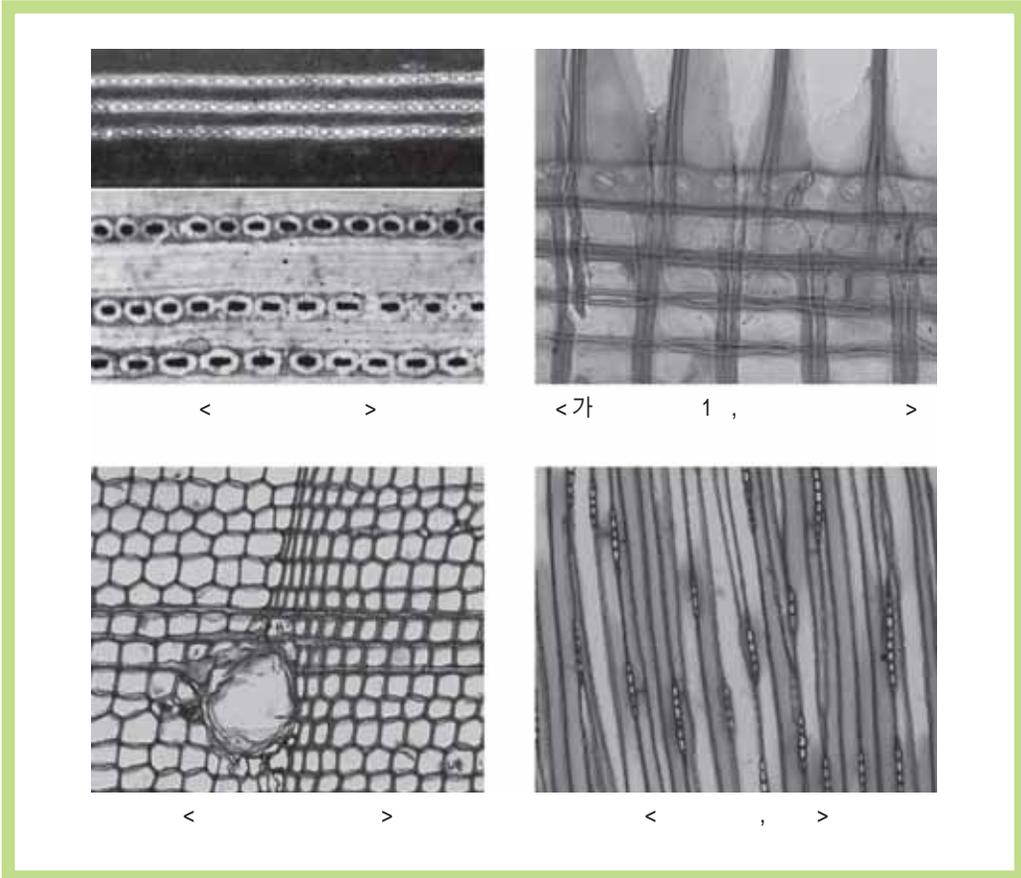


<가 (),가 >



< , >

(2) 3 ()



3.

가.

(1)

(2)

가

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가

. PIS

. 가

가

가

가





1. CA ,

Fresno 8 11
 - Fresno Fedex 가
 가 ,
 가
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 ,
 CA 6
 () Contra Costa,
 Fresno, Sacramento, San Diego, San
 Bernardino 5

- 7 Fresno
 가
 가
 CA San Diego
 Imperial 가
 가

2. EPPO
 Panel 13

EPPO Panel 13
 가 6. 30. 7. 2. Bykovo
 - Panel (Castanea)
 (Quercus) EPPO

- Panel EPPO A1 A2

Panel EPPO PM9/1(
)
PRA

working party

- Panel (clear - cut
zone) 가

가 500 3000m

- Panel

- (1km

) ,

- (4km) ,

4. , EU

Tuta absoluta(tomato
leafminer) ,

3.

EU (*Capsicum annuum*
C. frutescens)

- 8 31

(*Erwina amylovora*)

- (Pomoideae)

가

- 20m

가

- (*Lycopersicon*
esculentum)

- European Communities
(*Capsicum annuum*)

- European Union chilli
(*Capsicum frutescens*)

- *Tuta absoluta*

“ The fruit in this consignment has been sourced from a place of production which is free of *Tuta absoluta*. ” “ The fruit in this consignment has been subjected to a treatment effective against *Tuta absoluta*. ”

2006 Catellon

- *Tuta absoluta*

Tuta absoluta

T. absoluta

*T. absoluta*가 2009. 3 packing station

station

14 packing site가

- 2006 , , , , , , , , , ,

- *T. absoluta*가 가 2009. 7 *T. absoluta*가

T. absoluta 가 가 50- 100% 가 가

- Packing site



5. ,



Tuta absoluta

- *Tuta absoluta* 2006 Catellon

- *Tuta absoluta*

가

,
가 ,
,

helophoroides 18
sichuanensis 90

Dastarcus
, *Scleroderma*

-

-

Tuta absoluta

가 ,

가

,

7. , ,

6. ,

8.20.

8 4 8

가

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(*Cylas formicarius*)



(*Eusepes postfasciatus*)

8.

- 가 가 , 가 1500
- 가 가 .
- 가 2
- 30
- 가
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9.

APHIS 6 30

Avocados)
spp.

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(Hass
Anastrepha

Anastrepha
(natural

host)가

-

(interstate)

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- 2009.7.30.



10. ,

2010 2012
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 - 7 8 Federal Register , 10 1
 APHIS 12

: USD

| | | 2010 | 2011 | 2012 |
|---|----|------|------|------|
| | 50 | 77 | 104 | 106 |
| 가 | 23 | 42 | 60 | 61 |
| | 23 | 42 | 60 | 61 |
| | 7 | 11 | 15 | 15 |

APHIS

: USD

| | 2010 | 2011 |
|--|------|------|
| | 3 | 6 |
| | 6 | 12 |

“ 1 ”

“ 1 ”

CIQ 24

22 ,

54 , 164

8 ,

10 8 가

. 2001

3

100 가 43

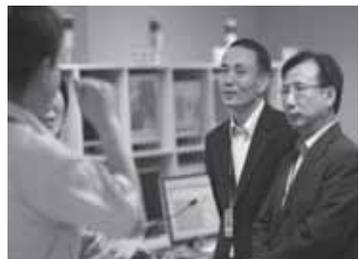


2 , 31 24 3

“ 1 ”

2 CIQ

24 ,



‘ 1 ’



“1 ”

가

1

X-ray

가

가

가

CIQ

가

3

6

CIQ

가
가



CIQ





가

X-ray

X-Ray X-ray 100% X-
 Ray 가
 가 Green-Tag
 Orange-Tag
 Tag 가

X-Ray

가

가



X-Ray



Green-Tag 가



「 24 」
 ...
 1989 가 2009 8 24 가
 가 8 300 가 500 가
 가 24 가
 가 24 가
 가 가
 가 가



가



「

가

가

...」



escho30@hanmail.net



가

가



, 가
^_^

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가

가

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가 ?

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00 가 , “ ” ()
가 . , 가
가 . 가 4
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「 」 1961. 12
, 가 가



byunsato@korea.kr



63 , 4 1 (7) < > (5): (),
 , 12 (), , ,
 1 2 ()
 . (1):
 . 가 (1):
 , (1):
 , (4): , , ,
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 (6) , , ,
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 (2): ,
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6.25

‘ () ’

prologue

가

7

가

가



Start~

lesson 1.



... 가

2

가

가

가



lesson 2.

4

가

가

가

2

가

lesson 3.

가

“

”

가

30

4.

.가

가

가

가

가

가

가

lesson



가



lesson 4.

가 가

epilogue

가

7

가가

2009 「 」



coreapq@korea.kr

가 가

가





가

가

가

가

Nectria haematococca



nbjeon@npqs.go.kr



kittymc@korea.kr

()
.
Nectria
.
haematococca (ana. *Fusarium solani*)
*N. haematococca*가
.
F. solani 가
.
N. haematococca

Ascomycota, Pezizomycotina, Sordariomycetes, Hypocreales,
Nectriaceae, *Nectria*

- (Tel.) *N. haematococca* (Berkeley & Broome) Samuels & Nirenberg.
- (Ana.) *F. solani* (Mart.) Sacc.



Dieffenbachia, Paprika 가
65 , ,

: Primer ITS1, ITS4

18S

rDNA . N.

haematococca . F. solani rDNA

99%, 98% ,

NCBI

N. haematococca

(Fig. 2).

: Perithecia

(Fig 1A).

130-
200 μm . 2 -
65-71 \times 6.3-
10 μm . 8 (1 cell 2 cells).

가 ,
10.5-14.1 \times 5.8-6.3 μm ,
가 가
가 (Fig. 1B).

monophialide 가

0 ; 8.3-10.9 \times 2.4-4 μm ,
1-2 ; 13.5-21.4 \times 3.7-4.9 μm , 3 ; 28.1-
32.5 \times 3.8-4.6 μm .(Fig. 1C). N. haematococca

가 ,
가
Strain A x a = Aa perithecia; A-
strain 35-55 \times 4.5-6 μm ,
6-9 \times 3-4 μm , a-strain
45-100 \times 5-8 μm , 8-12 \times 3-4 μm
(Booth 1971).

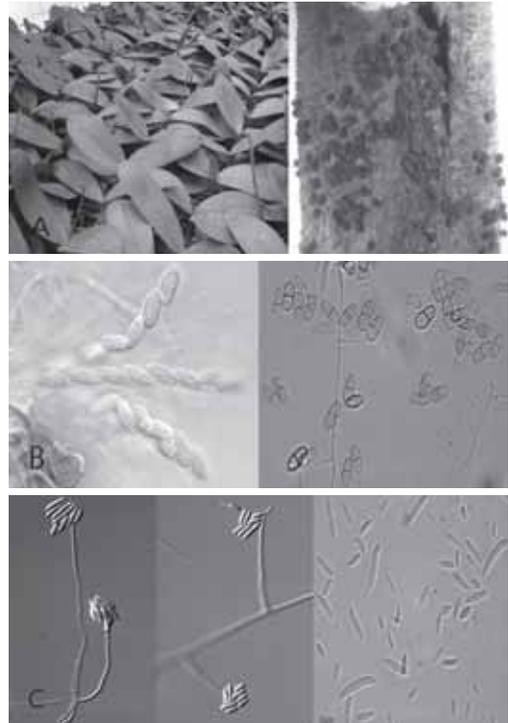


Fig. 1. Diseased symptoms in field and brown-red perithecia (A) formed on the base of a *Dendrobium*. Asci and ascospores (B) of *N. haematococca*. Monophialides, macro and microconidia (C) of *F. solani*

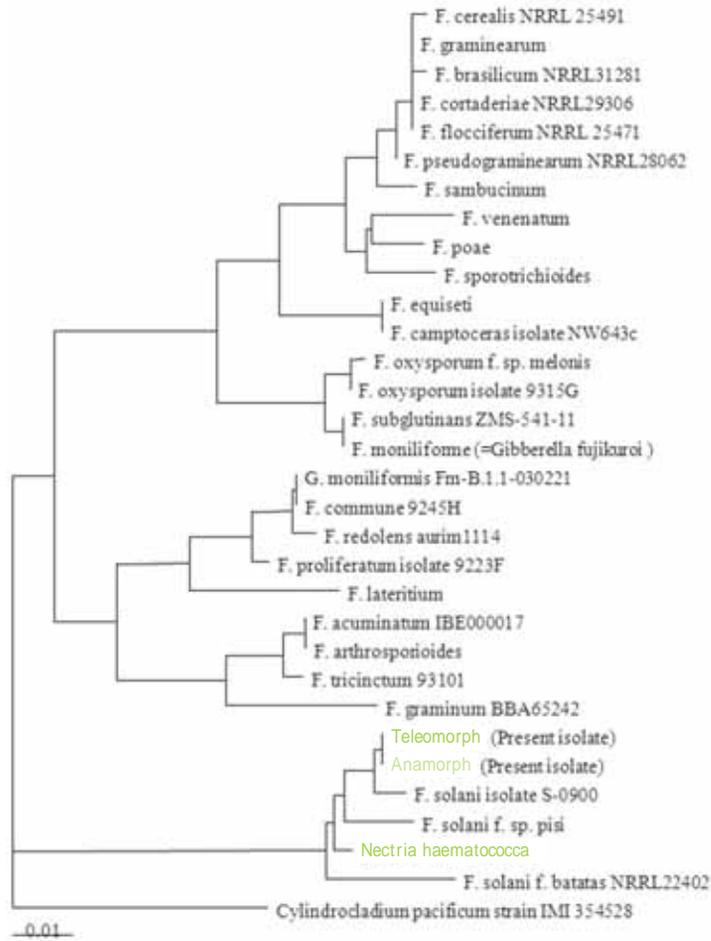


Fig. 2. Phylogenetic relationships in *F. solani* and related teleomorph based on rDNA sequence analysis.





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Q & A



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Q1

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喇

14

20

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Q2

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喇

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2009-24)

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- 2 3 . 18
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Q3

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예 3 , 가 .

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| | | | | 4 |
| · , · | | | , , , , , | 7 |
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| | | | | 7 |
| | | | | 3 |
| | | | | 4 |

Q5

?

喇

(, 2009-24) .

<

>

| - 1Kg | | 200g |
|-----------|---------|---------|
| • | | 50g |
| • . | | 500g |
| • | (. .) | |
| - 1Kg | | 10g |
| - | (,) | 2 |
| - | | * 5 |
| - | () | 5 |
| - 100 1kg | | 20 |
| • . | | 1kg |
| • | | |
| - 100 1kg | | 5kg |
| (,) | | |
| - | | 5 (,) |
| - | | 1 (,) |



| - | | 3kg |
|--|--|------|
| - () | | 1kg |
| () | | 1kg |
| (가 | | 500g |
|) | | |
| · · | | 1kg |
| () | | |
| · | | 20 |
| () | | 1kg |
| , , (| | 500g |
|) | | |
| (,) | | |
| - | | 200g |
| - · | | 50g |
| <p>· , kg, ,</p> <p>- ,</p> <p>- ·</p> <p>- : 100 , · 200</p> <p>- : 200 (CGMMV 300)</p> <p>- , 10</p> <p>· 가 가 , ,</p> <p>, ,</p> | | |



Q6

?

㉮

가

가

.

가



Q7

?

㉮ Thiram

가

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-

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()



Q8

?

㉮

가

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- ,



[(Thiram)]

| 가 | %(Oz/lbs) | |
|---|-------------------|--|
| 가 | (Thiram) 0.21% | |

$$\begin{aligned}
 & (\%) = 0.21 \times \{100 \div 42\} \\
 & \text{Thiram } 42\% \\
 & 0.21 \times (100 \div 42) = 0.5\%
 \end{aligned}$$

< >

1.

(thiram) 0.21%
 , 가
 가 가
 가 가 .

2.

- ()
- (%)
- (% , kg/1000kg , Oz/lbs)
 0.21%
 가 가 가 .
 (thiram) 가 .

(가)

| DISINFESTATION AND/OR DISINFECTION TREATMENT | |
|--|-----------------------------------|
| 1. DATE JULY 10, 2006 | 2. TREATMENT SLURRY |
| 3. CHEMICAL(active ingredient) THIRAM (42.5%) | 4.DURATION AND TEMPERATURE N/A |
| 5. CONCENTRATION 4g/1000g | 6. ADDITIONAL INFORMATION () |

$(\%) = 0.21 \times \{100 \div (\%)\}$
 $, 0.21 \times (100 \div 42.5) = 0.49 \quad 0.49\%$
 4g/1000g (0.4%) 가 .

(가)

| DISINFESTATION AND/OR DISINFECTION TREATMENT | |
|---|--|
| 1. DATE May 15, 2006 | 2. TREATMENT coating |
| 3. CHEMICAL(active ingredient) THIRAM (50%) | 4.DURATION AND TEMPERATURE room temp. |
| 5. CONCENTRATION 8oz/100lbs (eight ounces per hundred pounds of seed) | 6. ADDITIONAL INFORMATION () |

$0.21 \times (100 \div 50) = 0.42 \quad 0.42\%$
 $8\text{oz}/100\text{lbs} = 8 \times 0.0625 / 100\text{lbs} = 0.5\%$

(가)

Disinfection certificate

- Treatment : seed dressing
- Product name of chemicals : FU MEI SHUANG
- Thiram content of chemicals : 50%
- Chemical & Concentration : 0.5%

$$0.21 \times (100 \div 50) = 0.42 \quad 0.42\%$$

가 0.5%











아하~
그렇구나!!



01 해외여행객 휴대식물 검역

전국의 공항·항만에선 입국 전 해외 여행객이 가져 온 외국산 식물류에 대해 검사하고 있어요. 해외여행을 마치고 입국할 때는 휴대한 농산물 등 식물류를 반드시 신고하여 '식물검역'을 받으셔야 해요. 검사 결과 규제병해충이 발견되면 소독·폐기·반송되고 비용도 여행객이 부담해야하므로 가능한 외국 농산물을 갖고 오지 않는 것이 좋아요.

〈여행객 휴대식물 검역절차〉



〈수입 금지 식물〉

- 대부분의 열대과일(망고, 파파야 등), 열매채소의 생과실, 호두, 꽃콩류, 비종자, 고구마, 감자 등
- 사과나무, 포도나무 묘목 및 분재류
- 살아있는 병원균과 해충(애완용 곤충 포함)
- 흙 또는 흙이 묻어 있는 식물류



02 국제 우편 수입식물 검역

국제 우편으로 들어오는 수입식물에 대해서도 국제 우편 물류센터에서 검역하고 있어요.

〈우편 수입식물 검역절차〉



식물검역에 관한 문의전화

- 본원 : (031)449-0524
- 인천공항 : (032)740-2074
- 중부 : (032) 434-3200
- 영남 : (051)464-8895
- 호남 : (063)467-3456
- 제주 : (064)728-5400



09.7.10()~ 10.2.28()
2



09.7.14(), 8

가 .

가 .

가

DATA



09. 7. 23(),
21



09. 8. 20.(),
) 3
(09.11.)

Murali Bandla(APHIS



가

8.26 - 8. 27

가 . 가 ,

86

30 (10, 20)
가가 , 가 21,

8, 17가



9. 10() 11() 2
KOBACO



(, LMO)

9.11() (, LMO)
32 가



10 9. 11() 2009. 9. 20(),
()



KTV " 6"

(KTV) 9.22() ' 6
가 !'



'09.9.24

4

Stiekema()
()

Martin Boerma() Gert



()

2009

'09.9.30

150

가

가 ()

(1588 - 5117)

가 .

가





2009.7.7 ()
(CIQ)

2009.7.10 ()
(*Anubias lanceolata*)

Anubias

7.27

Anubias



“ (Office visiting) ” 가가 9.15 ()
 2009. 9
 (9), (7),
 (7)



9.15()

가
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가
2009. 9. 14 ~ 10. 2

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7. 28 ()

가
가

가

X-ray



3

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가



7. 17 23

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28 (54) 09. 8. 9. 8 「2009」

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가 9. 11 ,

가 FTA
2001



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09. 9.14 10.2 (4)
가가

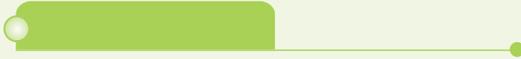
32
() X-ray

, 가 가 (, ,
) 가



() 9. 14 가
80





7. 17



X-ray

7. 23 9. 24 2

X-ray

20



X-ray

가

9. 14

가

50



가



4 9. 30 3/4 10

7 374 가 『
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가 가
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「 』

9

8. 18

11 가

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가





2009

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9. 11 9. 20 (10)

4

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56

171 가

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2

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09.9.3.



09.9.4.



09.9.9.



09.9.10.



09.9.16.



09.9.23.



2
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 , 3,500
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 ,
 7. 15
 2,000TEU
 가
 4
 ()
 ()
 2 ,
 500 가
 51 TEU

2009
 '09 7 6
 . 2011
 20

1%(800TEU)
 2010 19 TEU
 2015 52
 TEU 가





2009. 9. 1

13



(1)



LMO

TV

7. 20 () KBS

『

가 』

가

()

TV

가

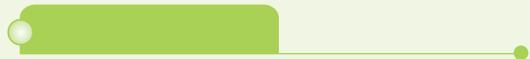
(-1)



1 1

7. 25 8. 23

9. 30 1 1
2



X-ray

9. 17

9. 15

x-ray

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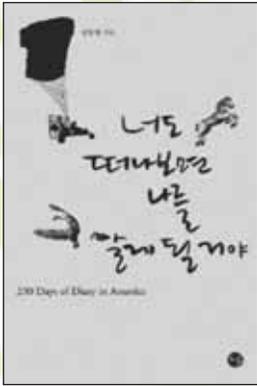
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‘ On the Road ’

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‘ 가 is, life as yet untouched by tragedy.’

.(The deepest definition of youth

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2009. 1. 1 9. 30

| | | 168 | 3,918 | 203 | 1,846 | 205 | 2,712 |
|--|--|-----|-------|-----|-------|-----|-------|
| | | 142 | 3,672 | 198 | 1,803 | 144 | 1,582 |
| | | 127 | 3,542 | 173 | 1,589 | 117 | 1,393 |
| | | 4 | 31 | 7 | 17 | 6 | 15 |
| | | 7 | 49 | 9 | 139 | 19 | 172 |
| | | 4 | 50 | 9 | 58 | 2 | 2 |
| | | 26 | 246 | 5 | 43 | 61 | 1,130 |
| | | 10 | 79 | 4 | 42 | 46 | 1,043 |
| | | 2 | 17 | - | - | 1 | 1 |
| | | 12 | 87 | - | - | - | - |
| | | 2 | 63 | 1 | 1 | 14 | 86 |

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576 8,476
 168 (29%) 3,918 (46%)
 , 203 (35%)
 1,846 (22%), 205
 (36%) 2,712 (32%) .

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203 1,846
 198 (98%) 1,803 (98%)
 5 (2%) 43 (2%)
 . (1,589 88%)
 139 ,
 58 , 17
 42 , 1 .

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168 3,918
 142 (85%) 3,672 (94%)
 26 (15%) 246 (6%) .
 (3,542 96%)
 50 , 49 ,
 31
 87 , 79 , 63 ,
 17 .

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205 2,712
 144 (70%) 1,582 (58%)
 61 (30%) 1,130 (42%)
 . (1,393
 88%)
 172 , 15 , 2
 (1,043 92%)
 86 , 1



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2009. 1. 1 ~ 9. 30

| | | | | | ('09.) | | | (%)(B/A) |
|--|----------------|------------|------------|-----|---------|--------|---------|----------|
| | | '09.(A) | '08. | (%) | . | (B) | | |
| | | 2,955,982 | 2,640,480 | 112 | 25,913 | 55,519 | 81,432 | 3 |
| | , | 16,477,199 | 19,187,613 | 86 | 844,315 | 10,744 | 855,059 | 5 |
| | m ³ | 4,895 | 5,127 | 95 | 3,378 | 0 | 3,378 | 69 |
| | , | 177,051 | 216,944 | 82 | 11,758 | 1,011 | 12,769 | 7 |
| | | 58,030 | 51,332 | 113 | 9,397 | 20 | 9,417 | 16 |
| | , | 228,091 | 103,020 | 221 | 1,217 | 254 | 1,471 | 1 |
| | m ³ | 13 | 13 | 100 | 9 | 0 | 9 | 69 |
| | , | 48,479 | 43,943 | 110 | 748 | 2 | 750 | 2 |
| | | 2,897,952 | 2,589,148 | 112 | 16,516 | 55,499 | 72,015 | 2 |
| | , | 16,249,108 | 19,084,593 | 85 | 843,098 | 10,490 | 853,588 | 5 |
| | m ³ | 4,882 | 5,114 | 95 | 3,369 | 0 | 3,369 | 69 |
| | , | 128,572 | 173,001 | 74 | 11,010 | 1,009 | 12,019 | 9 |

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2009. 1. 1 ~ 9. 30

| | | | | | ('09.) | | | (B) (%) (B/A) |
|--|----------------|------------|------------|-----|---------|--------|---------|---------------------|
| | | '09.(A) | '08. | (%) | | | | |
| | | 148,740 | 153,115 | 97 | 25,836 | 1,214 | 27,050 | 18 |
| | , | 16,460,141 | 19,174,377 | 86 | 844,315 | 10,503 | 854,818 | 5 |
| | m ³ | 4,895 | 5,127 | 95 | 3,378 | 0 | 3,378 | 69 |
| | , | 176,287 | 216,061 | 82 | 11,733 | 982 | 12,715 | 7 |
| | | 41,777 | 35,201 | 119 | 9,378 | 14 | 9,392 | 22 |
| | , | 227,729 | 102,619 | 222 | 1,217 | 254 | 1,471 | 1 |
| | m ³ | 13 | 13 | 100 | 9 | 0 | 9 | 69 |
| | , | 48,305 | 43,748 | 110 | 748 | 2 | 750 | 2 |
| | | 106,963 | 117,914 | 91 | 16,458 | 1,200 | 17,658 | 17 |
| | , | 16,232,412 | 19,071,758 | 85 | 843,098 | 10,249 | 853,347 | 5 |
| | m ³ | 4,882 | 5,114 | 95 | 3,369 | 0 | 3,369 | 69 |
| | , | 127,982 | 172,313 | 74 | 10,985 | 980 | 11,965 | 9 |

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2009. 1. 1 ~ 9. 30

| | | '09.(A) | | '08.(B) | | (A/B, %) | | | |
|--|----------------|---------|-----------|---------|-----------|----------|-------|-----|--|
| | | | | | | | | | |
| | | 513 | 8,576 | 120 | 94 | 428 | 9,143 | | |
| | | 778 | 347 | 573 | 13 | 136 | 2,775 | , | |
| | | 641 | 8,811 | 149 | 644 | 430 | 1,369 | , | |
| | | 1,422 | 7,878 | 794 | 2,577 | 179 | 306 | , , | |
| | | 418 | 1,747 | 240 | 693 | 174 | 252 | , | |
| | | 580 | 4,718 | 414 | 2,241 | 140 | 211 | | |
| | | 855 | 846 | 668 | 429 | 128 | 197 | | |
| | | 397 | 10,439 | 327 | 7,204 | 121 | 145 | , | |
| | | 670 | 7,085 | 490 | 5,751 | 137 | 123 | | |
| | | 2,866 | 13,472 | 2,708 | 12,647 | 106 | 107 | | |
| | | 18 | 164 | 1 | 4 | 1,800 | 4,108 | | |
| | | 382 | 9,226 | 139 | 4,031 | 275 | 229 | | |
| | | 76 | 1,066 | 36 | 466 | 211 | 229 | | |
| | | 628 | 7,385 | 339 | 3,977 | 185 | 186 | | |
| | | 1,391 | 101,327 | 977 | 59,414 | 142 | 171 | , | |
| | | 116 | 542 | 100 | 349 | 116 | 155 | , | |
| | | 158 | 44 | 123 | 29 | 128 | 153 | , | |
| | | 402 | 17,660 | 315 | 12,043 | 128 | 147 | , | |
| | | 117 | 17,759 | 87 | 14,987 | 134 | 118 | | |
| | | 1,079 | 3,824 | 1,058 | 3,356 | 102 | 114 | | |
| | | 529 | 1,591,214 | 538 | 1,701,016 | 98 | 94 | , , | |
| | | 960 | 53,683 | 1,328 | 58,865 | 72 | 91 | | |
| | | 177 | 6,679 | 231 | 7,415 | 77 | 90 | | |
| | | 3,939 | 68,621 | 5,922 | 104,828 | 67 | 65 | , | |
| | m ³ | 1,724 | 90 | 2,735 | 145 | 63 | 62 | | |
| | | 430 | 6,581 | 542 | 10,725 | 79 | 61 | | |
| | | 190 | 2,312 | 319 | 4,038 | 60 | 57 | | |
| | | 228 | 47 | 229 | 430 | 100 | 11 | , | |



National Plant Quarantine Service

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| // | // | | '09.7.18. ~ '11.7.17. | '09.7.18. | |
| | | | '09.7.20. ~ '10.7.19. | '09.7.20. | |
| | // | | '09.7.20. ~ '09.12.31. | '09.7.20. | // |
| 2 | // | | '09.8.24 ~ '10.8.23. | '09.8.24. | // |
| 1 | | | '09.9.8. ~ '10.9.7. | '09.9.8. | // |
| | 9 | | '09.9.15. ~ '10.9.14. | '09.9.15. | // |
| 1 | | | '09.9.29. ~ '10.9.28. | '09.9.29. | // |

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