Botryosphaeriaceae e kiwi: analisi di una problematica emergente in Italia

Linaldeddu B.T. [1] **,** Bregant C. [1] , Turra F. [1] , Carloni F. [2] , Murolo S. [2] , Donati I. [3]

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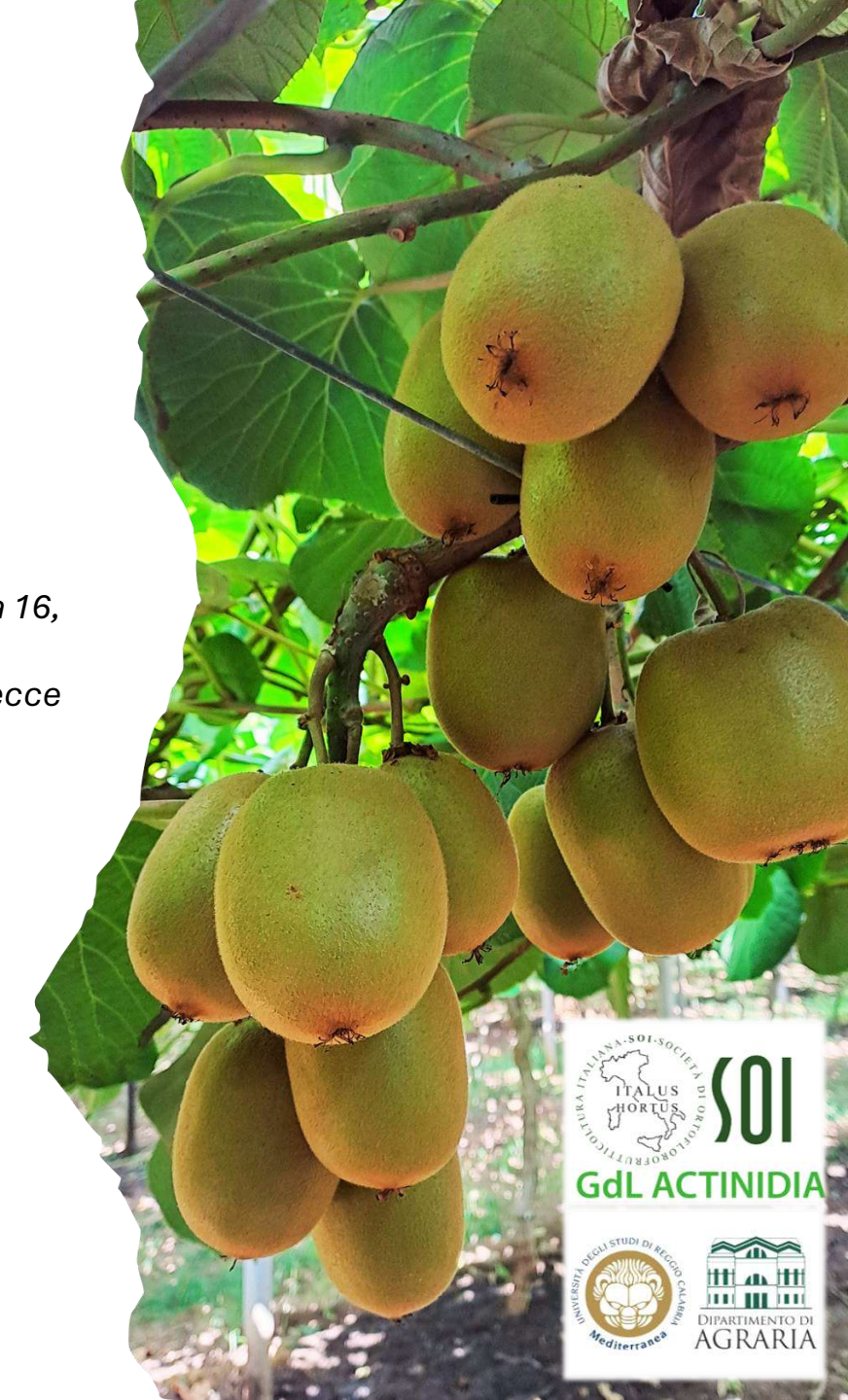
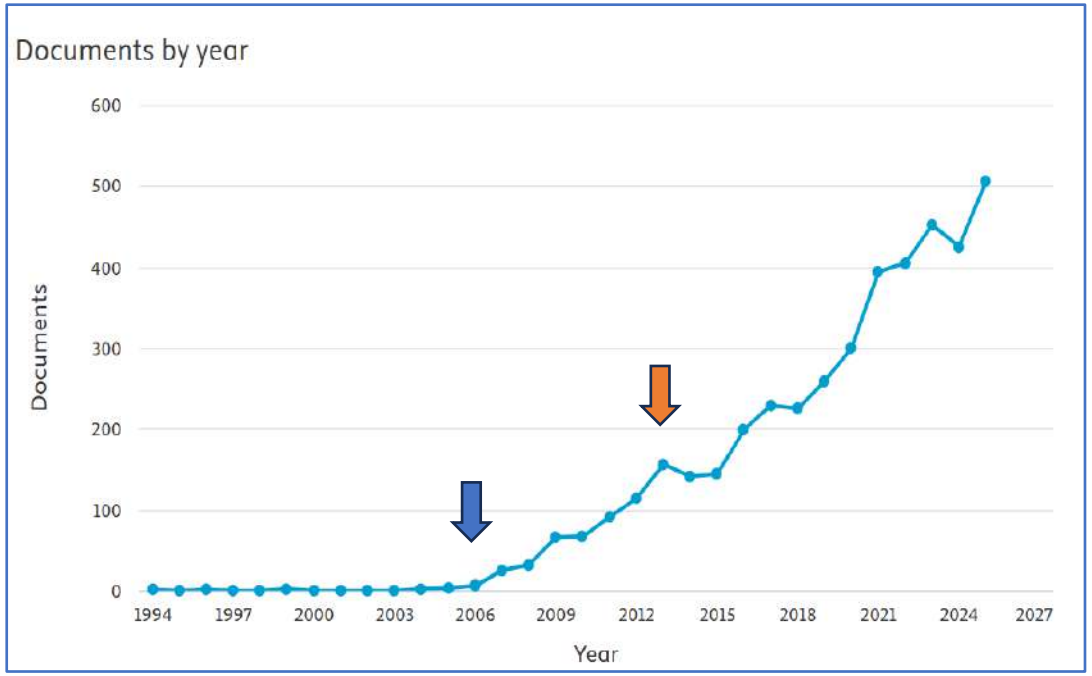


Giornate Tecniche
GdL SOI Actinidia in Calabria

7-8 settembre 2026

Famiglia *Botryosphaeriaceae*

23 generi e oltre 300 specie conosciute in coltura



Articoli per anno

Genere	Temp. min.	Temp. max.
1. *Botryosphaeria*	7 °C	37 °C
2. *Diplodia*	5 °C	33 °C
3. *Neofusicoccum*	7 °C	35 °C
4. *Lasiodiplodia*	9 °C	40 °C

Infezioni multiple

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Diffusione in Italia

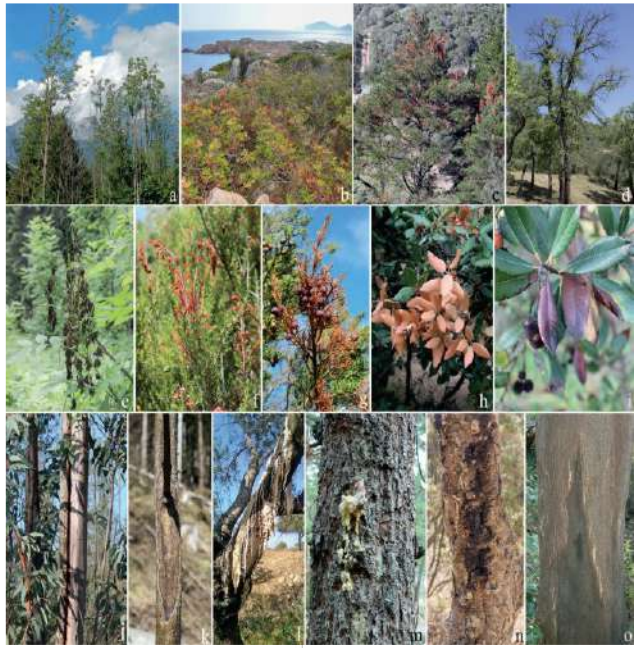
OPEN ACCESS

Citation: D. Aiello, C. Bregant, A. Carlucci, V. Guarnaccia, G. Gusella, B.T. Linaldeddu, L. Mugnai, M.L. Raimondo, G. Polizzi (2023) Current status of *Botryosphaeriaceae* species in Italy: Impacts on agricultural crops and forest ecosystems. *Phytopathologia Mediterranea* 62(3): 381-412. doi: 10.36253/phyto-14711

Review

Current status of *Botryosphaeriaceae* species in Italy: Impacts on agricultural crops and forest ecosystems

DALIA AIELLO[1,*], CARLO BREGANT[2], ANTONIA CARLUCCI[3], VLADIMIRO GUARNACCIA[4], GIORGIO GUSELLA[1], BENEDETTO TEODORO LINALDEDDU[2], LAURA MUGNAI[5], MARIA LUISA RAIMONDO[3], GIANCARLO POLIZZI[1]



57 specie e 10 generi

- ***Neofusicoccum parvum***
- ***Botryosphaeria dothidea***
- ***Diplodia seriata***

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Sintomi

Necrosi e marciumi dei frutti

Necrosi fogliari

Cancri e disseccamenti

Necrosi e marciumi radicale

Foto da: Latha et al., 2009. Australasian Plant Disease Notes, 4,19–20

Sintomo distintivo

Necrosi dei tessuti legnosi a forma di cuneo

Botryosphaeria dothidea

Melograno

Diplodia mutila

Vite

Neofusicoccum australe

Fico

Lasiodiplodia pseudotheobromae

Avocado

Neofusicoccum parvum

Olivo

Diplodia fraxini

Frassino

Diplodia corticola

Leccio

Diplodia seriata

Noce

Dothiorella franceschinii

Alaterno

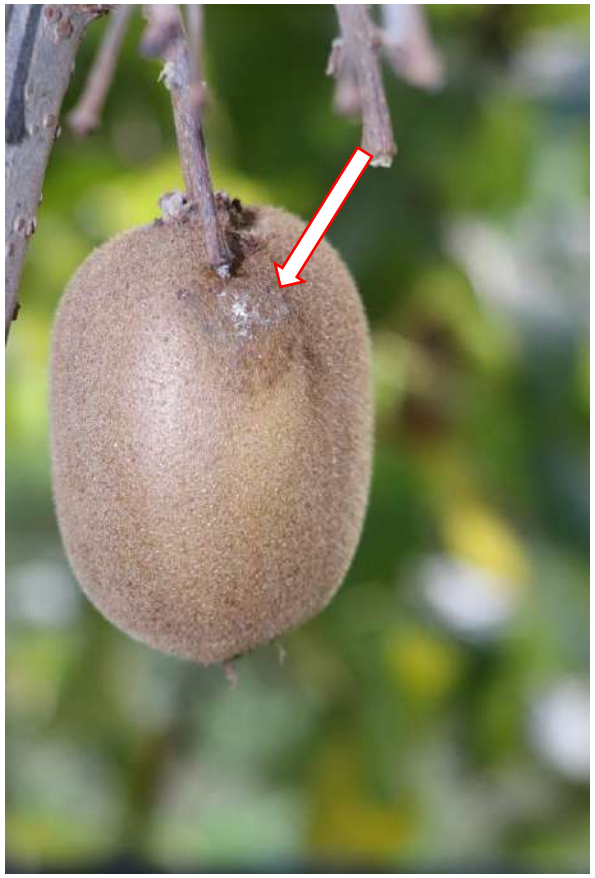
Sardiniella urbana

Bagolaro

GdL ACTINIDIA

Sintomi su Kiwi






Necrosi e marciume dei frutti

Sintomi su Kiwi

Necrosi fogliare

Sintomi su Kiwi

Infezioni multiple

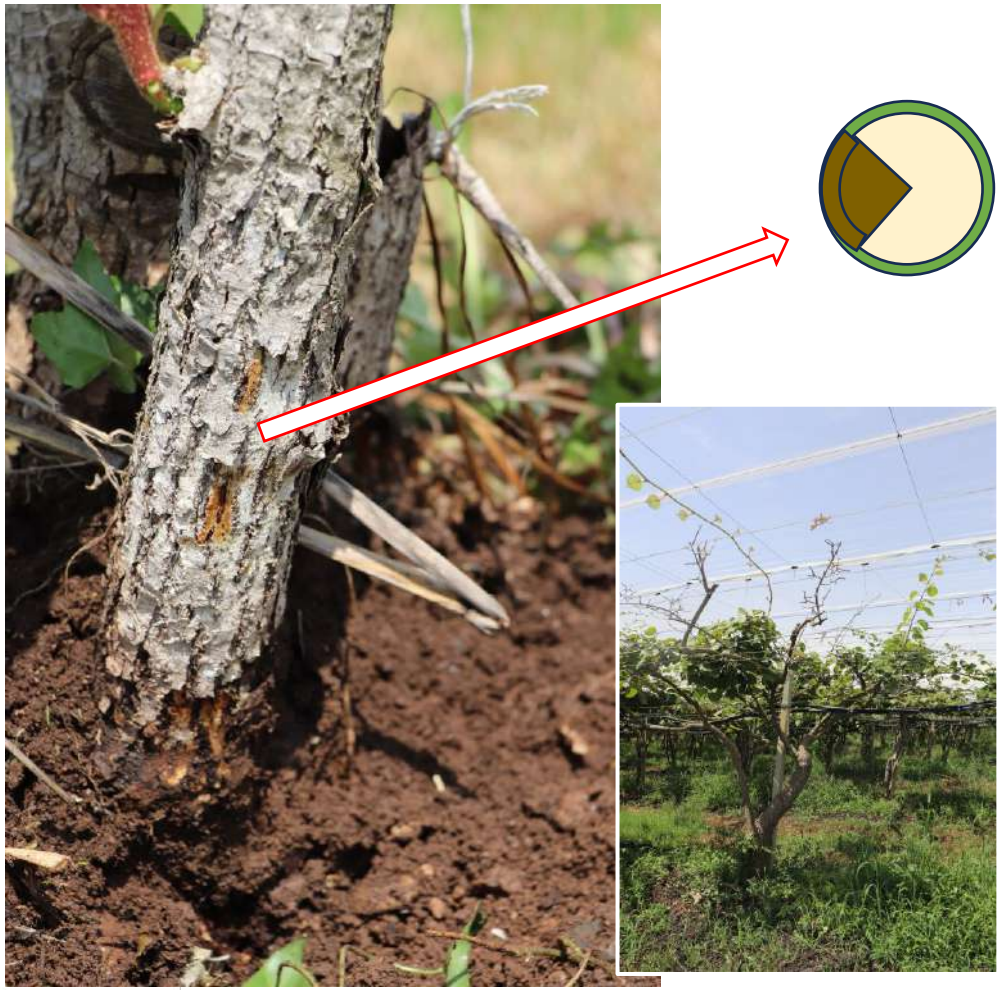
Cancri depressi e necrosi del legno

Sintomi su Kiwi

Cancri con essudati bruno-rossastri e getti epicormici

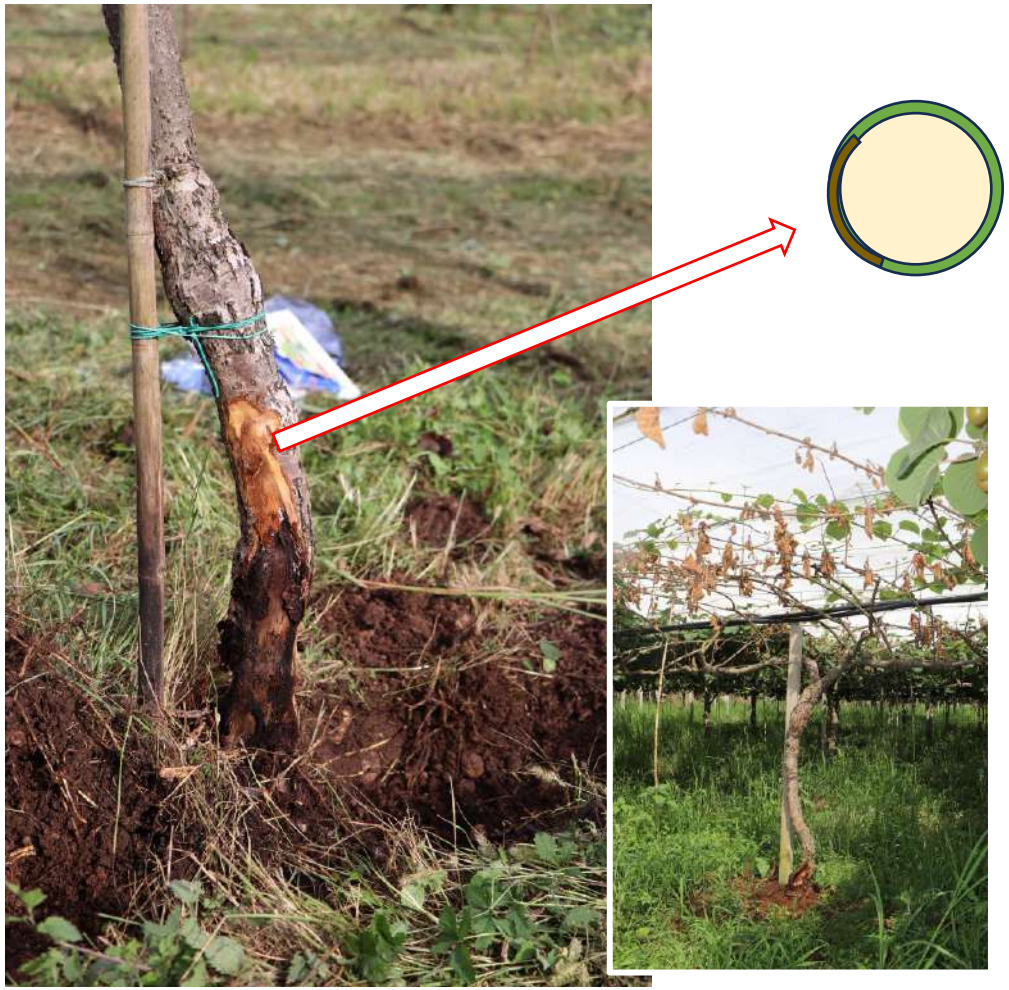
Sintomi su Kiwi

Neofusicoccum parvum



Disseccamenti settoriali

Phytophthora cinnamomi

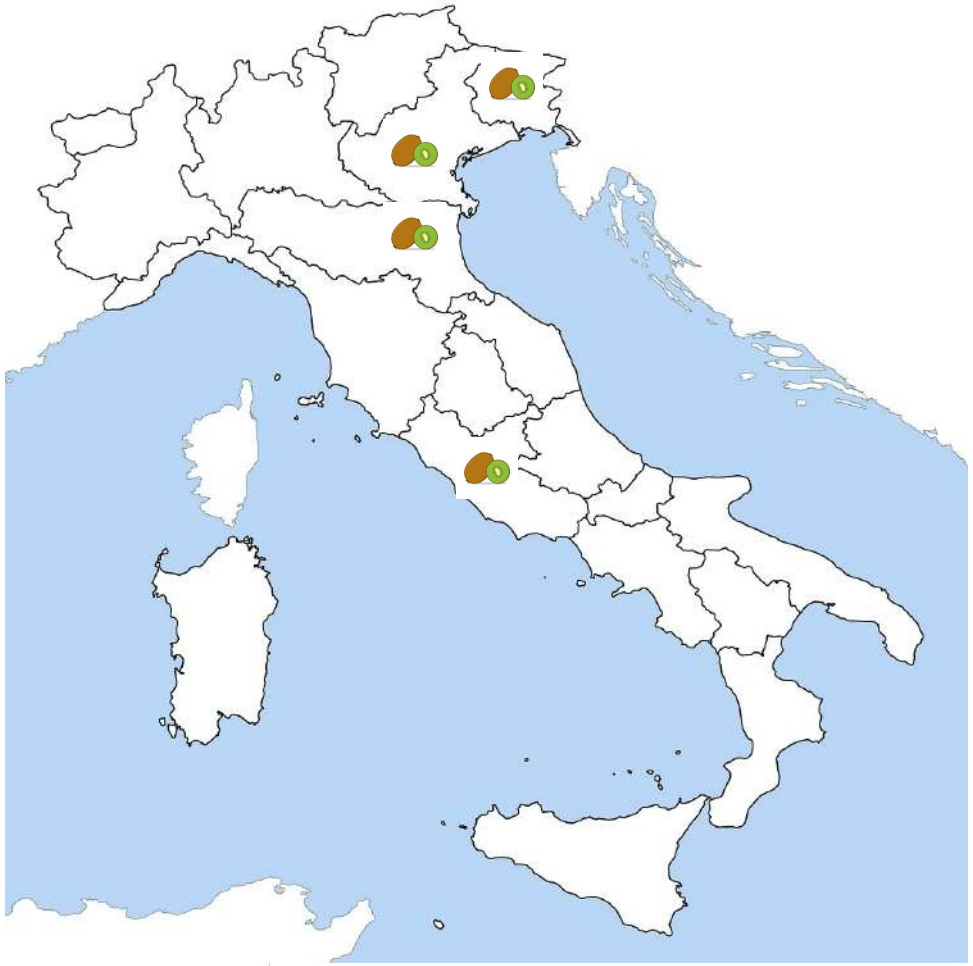


Moria

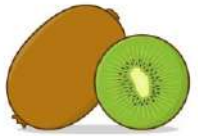
Coinfezioni

Specie di *Botryosphaeriaceae* isolate da Kiwi in Italia

Percentuale di piante sintomatiche per azienda variabile dal 7% a oltre il 90%



>500 campioni sintomatici dal 2017



Frutti

Foglie, gemme e germogli

Tessuti legnosi

- ***Botryosphaeria dothidea*** 
- ***Diplodia mutila*** 
- ***Diplodia seriata*** 
- ***Neofusicoccum parvum*** 

Panorama internazionale

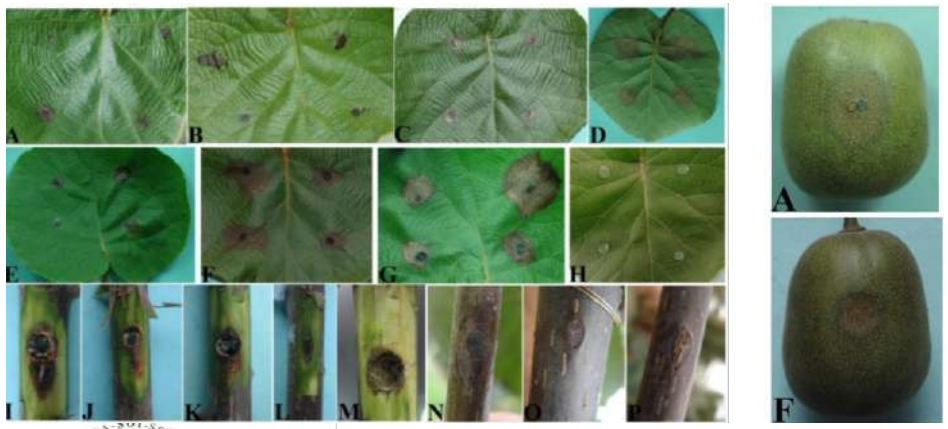
Identification of Botryosphaeriaceae Species Causing Kiwifruit Rot in Sichuan Province, China

You Zhou and **Guoshu Gong,** Department of Plant Pathology, College of Agriculture, Sichuan Agricultural University, Chengdu 611130, P. R. China; **Yongliang Cui,** Department of Plant Pathology, College of Agriculture, Sichuan Agricultural University, and Sichuan Academy of Natural Resource and Sciences, Chengdu 610041, P. R. China; **Daixi Zhang,** College of Veterinary Medicine, Sichuan Agricultural University, Chengdu 611130, P. R. China; **Xiaoli Chang,** Department of Plant Pathology, College of Agriculture, Sichuan Agricultural University; **Rongping Hu,** Sichuan Academy of Agricultural Sciences, Chengdu 611130, P. R. China; and **Na Liu** and **Xiaofang Sun,** Department of Plant Pathology, College of Agriculture, Sichuan Agricultural University

Abstract

Zhou, Y., Gong, G., Cui, Y., Zhang, D., Chang, X., Hu, R., Liu, N., and Sun, X. 2015. Identification of Botryosphaeriaceae species causing kiwifruit rot in Sichuan Province, China. Plant Dis. 99:699-708.

- ***Botryosphaeria dothidea***
- ***Lasiodiplodia theobromae***
- ***Neofusicoccum parvum***



Plant Disease • 2021 • 105:1308-1319 • https://doi.org/10.1094/PDIS-05-20-0988-RE

*e-Xtra**

Identification and Pathogenicity of *Diplodia*, *Neofusicoccum*, *Cadophora*, and *Diaporthe* Species Associated with Cordon Dieback in Kiwifruit cultivar Hayward in Central Chile

Gonzalo A. Díaz,[1,†] Juan Pablo Zoffoli,[2] Enrique E. Ferrada,[3] and Mauricio Lolas[1]

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[2] Departamento de Fruticultura y Enología, Facultad de Agronomía e Ingeniería Forestal, Pontificia Universidad Católica de Chile, Vicuña Mackena 4860, Macul, Santiago, Chile
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- ***Diplodia seriata***
- ***Neofusicoccum parvum***

GdL ACTINIDIA

Panorama internazionale

MYCOTAXON

Vol. XXIV, pp. 445-458 October-December 1985

BOTRYOSPHAERIA AND FUSICOCCUM SPECIES ASSOCIATED WITH RIPE FRUIT ROT OF ACTINIDIA DELICIOSA (KIWIFRUIT) IN NEW ZEALAND

S.R. PENNYCOOK & G.J. SAMUELS

Plant Diseases Division, DSIR, Private Bag, Auckland, New Zealand

- ***Neofusicuccum luteum* sp. nov.**
- ***Neofusicoccum parvum* sp. nov.**

- ***Botryosphaeria dothidea***

New Zealand Journal of Experimental Agriculture, 1985, Vol. 13: 289–299 289
0301–5521/85/1304–0289$2.50/0

Review

Fungal fruit rots of *Actinidia deliciosa* (kiwifruit)

S. R. PENNYCOOK
Plant Diseases Division, DSIR
Private Bag, Auckland, New Zealand

and rudimentary (Fletcher 1971; Ford 1971; Sale 1981, 1983, 1984).

This paper reviews our current knowledge in New

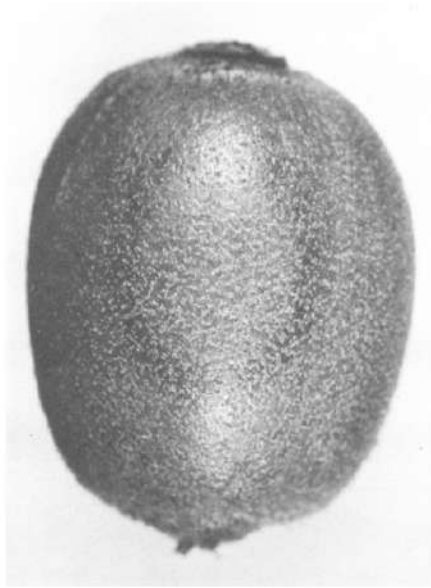


Fig. 9 External symptoms of *Botryosphaeria dothidea* ripe rot of kiwifruit.

Etiology

Botryosphaeria dothidea is a cosmopolitan fungus with a wide host range (Punithalingam & Holliday 1973; as *B. ribis* Grossenbacher & Duggar). In kiwifruit orchards, the most abundant source of inoculum is in the numerous dead twigs and branches in poplar shelterbelt trees. The bark of these twigs and branches is often riddled with black, asexual and sexual fructifications (pycnidia and ascomata) of *B. dothidea* (Fig. 12). Ascomata and pycnidia have also been found occasionally in the bark of kiwifruit prunings that have been left to lie on the ground in the orchard.

In samples of kiwifruits picked from a block sheltered by heavily infected poplars, incidence of *B. dothidea* ripe rot decreased with increasing distance from the trees (S. R. Pennycook unpublished data). This distribution pattern suggests that infections are caused by wind-borne ascospores which are discharged into the air during warm, wet weather (Sutton 1981). (The conidia, an alternative potential source of inoculum, are produced in slimy masses that are distributed over only relatively short distances by rain splash.) There is no unequivocal evidence of when the fruits become infected; warm, wet weather, conducive to ascospore dispersal and infection, can occur at any period of the growing season, but some experimental data suggest that infections become established as early as blossom or fruit set (see below).

Ciclo biologico ed epidemiologia

Identification of Botryosphaeriaceae Species Causing Kiwifruit Rot in Sichuan Province, China

You Zhou and Guoshu Gong, Department of Plant Pathology, College of Agriculture, Sichuan Agricultural University, Chengdu 611130, P. R. China; Yongliang Cui, Department of Plant Pathology, College of Agriculture, Sichuan Agricultural University, and Sichuan Academy of Natural Resource and Sciences, Chengdu 610041, P. R. China; Daixi Zhang, College of Veterinary Medicine, Sichuan Agricultural University, Chengdu 611130, P. R. China; Xiaoli Chang, Department of Plant Pathology, College of Agriculture, Sichuan Agricultural University; Rongping Hu, Sichuan Academy of Agricultural Sciences, Chengdu 611130, P. R. China; and Na Liu and Xiaofang Sun, Department of Plant Pathology, College of Agriculture, Sichuan Agricultural University

Sorgente di inoculo: picnidi che si differenziano nel legno infetto (corte d'infezione), residui di potatura e frutti mummificati.

Rilascio dell'inoculo: nei periodi caldo umidi.

Dispersione dell'inoculo: pioggia, vento, insetti. animali e uomo

Infezione: in modo attivo e attraverso aperure naturali e/o ferite

Home > European Journal of Plant Pathology > Article

Inoculum sources of *Botryosphaeriaceae* species in New Zealand grapevine nurseries

Published: 09 September 2012

Volume 135, pages 159–174 (2013) Cite this article

- ***Neofusicuccum luteum* (53%)**
- ***Neofusicoccum parvum* (88%)**

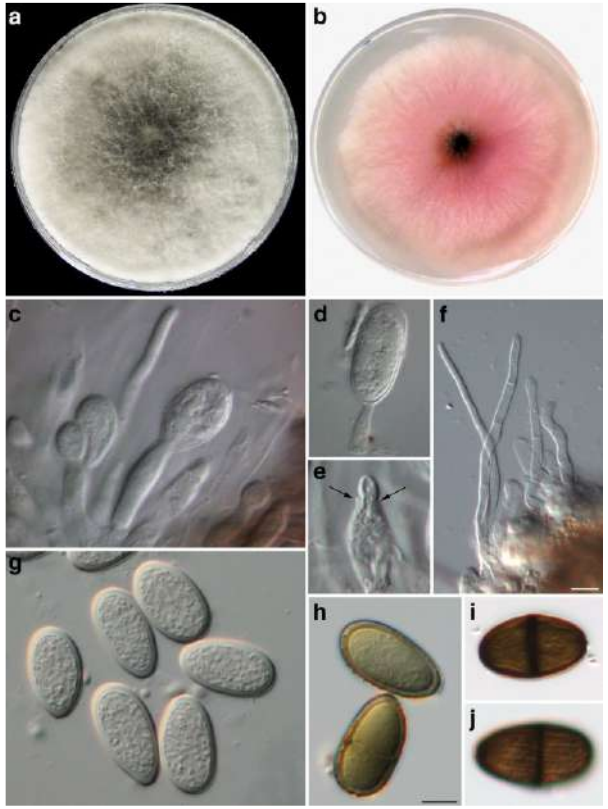
Materiale vivaistico

Neofusicoccum parvum

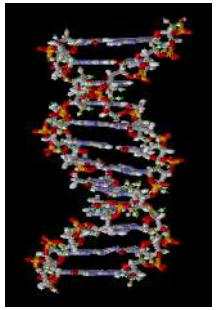
Diagnosi

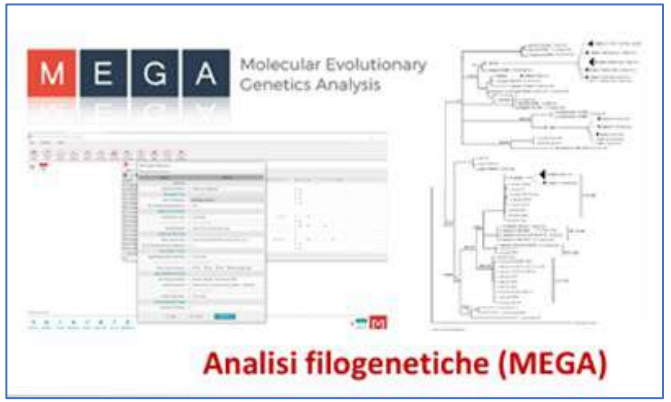
Isolamento diretto su substrati universali SEMPLICE

Identificazione su base morfologica COMPLESSA



Identificazione su base genetica FONDAMENTALE





Lotta chimica

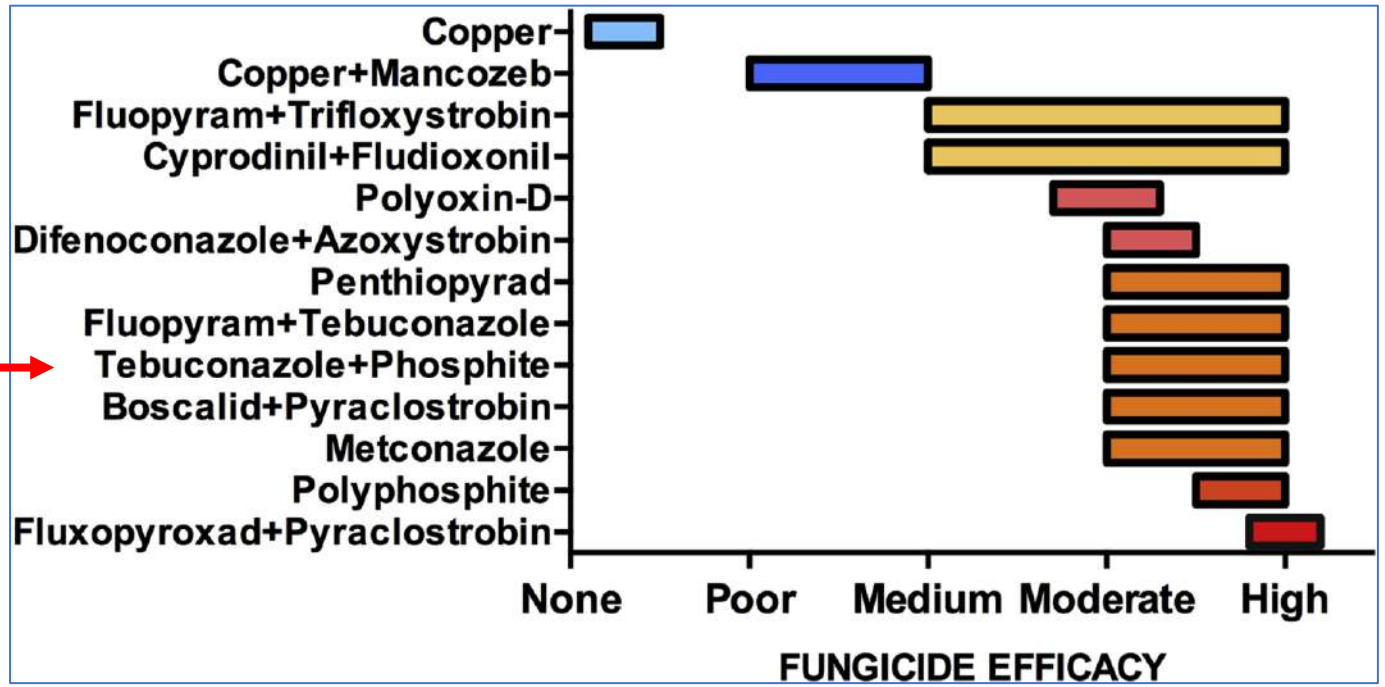
Evaluation of Fungicides for the Management of Botryosphaeria Canker of Grapevines

Wayne M. Pitt, National Wine and Grape Industry Centre, School of Agricultural and Wine Sciences, Charles Sturt University, Locked Bag 588, Wagga Wagga, NSW 2678, Australia; **Mark R. Sosnowski,** South Australian Research and Development Institute, GPO Box 397, Adelaide, SA 5001, Australia; **Rujuan Huang,** School of Biomedical Sciences, Charles Sturt University, Australia; and **Yu Qiu, Christopher C. Steel,** and **Sandra Savocchia,** National Wine and Grape Industry Centre, School of Agricultural and Wine Sciences, Charles Sturt University, Australia

Crop Protection
Volume 126, December 2019, 104927

Management of Botryosphaeria canker and blight diseases of temperate zone nut crops

Juan Moral [1], David Morgan, Themis J. Michailides



Lotta biologica

frontiers | Frontiers in Microbiology

TYPE Original Research
PUBLISHED 29 April 2025
DOI 10.3389/fmicb.2025.1562366

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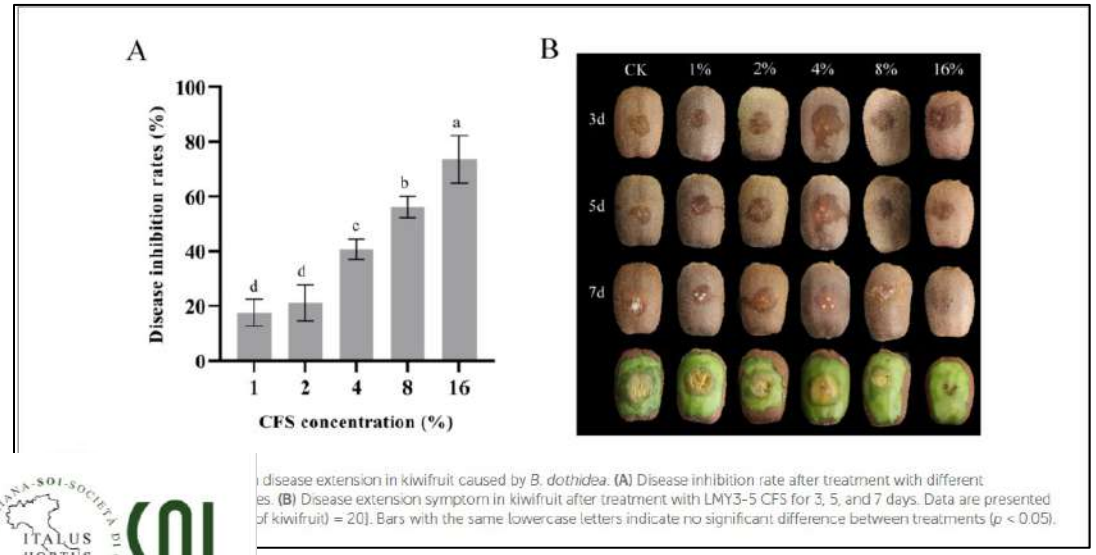
Bacillus velezensis LMY3-5 for the biocontrol of soft rot in kiwifruit: antifungal action and underlying mechanisms

Chunguang Ren[1†], Yu Liu[1†], Wenwen Su[1] and Bing Tian[2*]



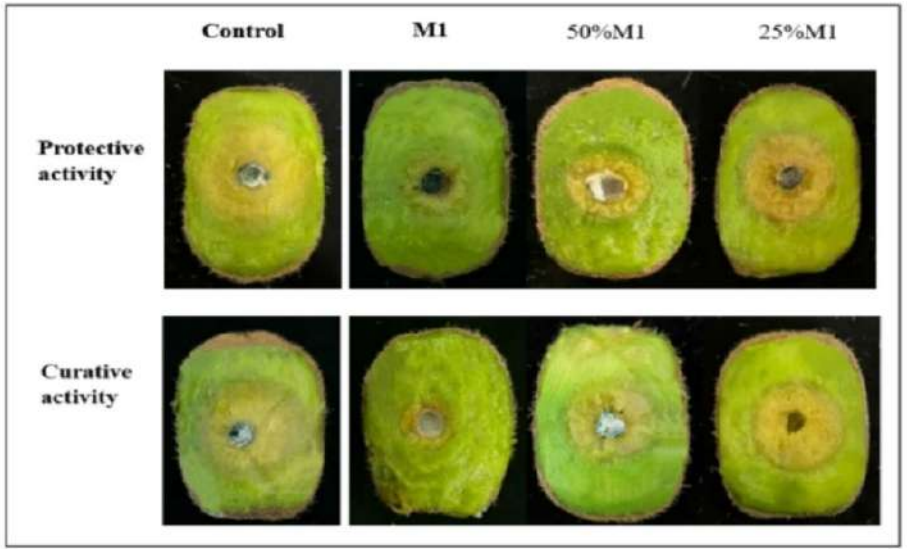
disease extension in kiwifruit caused by *B. dothidea*. (A) Disease inhibition rate after treatment with different
es. (B) Disease extension symptom in kiwifruit after treatment with LMY3-5 CFS for 3, 5, and 7 days. Data are presented
of kiwifruit) = 20). Bars with the same lowercase letters indicate no significant difference between treatments ($p < 0.05$).

Eur J Plant Pathol (2026) 174:1359–1372
https://doi.org/10.1007/s10658-026-03202-9

Check for updates

The biocontrol potential of *Trichoderma asperellum* M1 against kiwifruit soft rot caused by *Botryosphaeria dothidea*

Qing Tan · Jieyu Li · Qian Zhou · Chenlan Li · Ziqin Bai · Geng Liu · Jieping Lin · Hui Luo · Wei Xue



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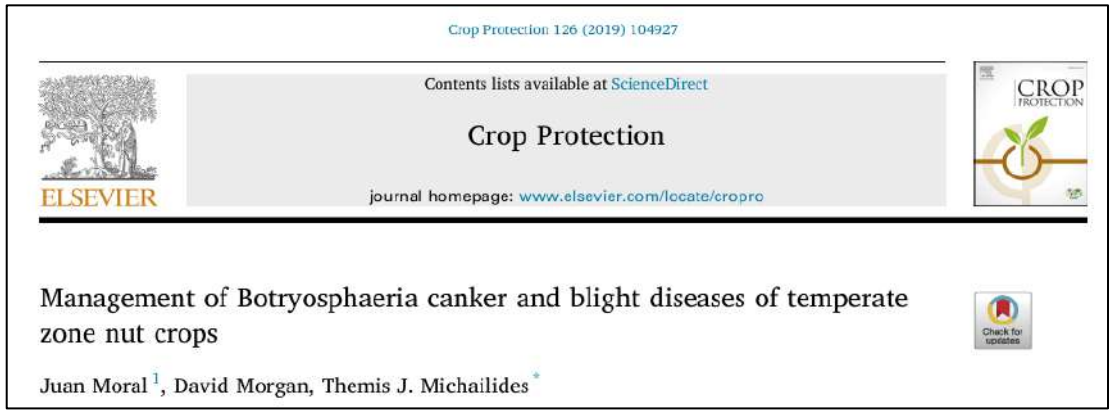
Strategie di gestione

Misure preventive

1. Disinfettare gli attrezzi da taglio (forbici e seghetti)
2. Proteggere le ferite
3. Tagliare e allontanare il materiale vegetale sintomatico



Crop Protection 126 (2019) 104927

Contents lists available at ScienceDirect

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journal homepage: www.elsevier.com/locate/cropro

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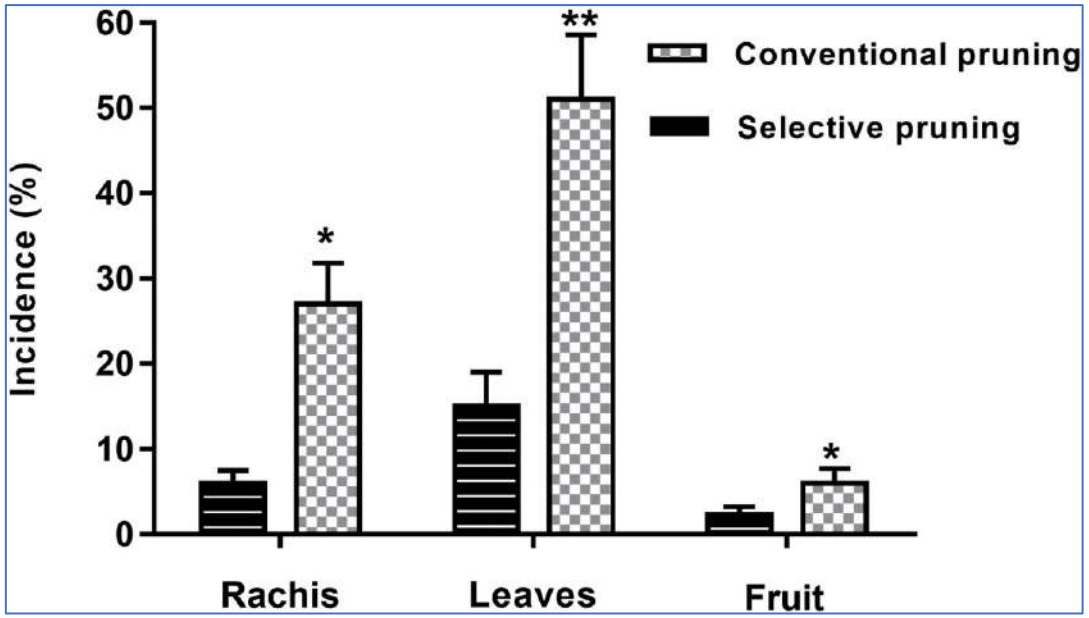
CROP PROTECTION

Management of Botryosphaeria canker and blight diseases of temperate zone nut crops

Juan Moral [1], David Morgan, Themis J. Michailides *

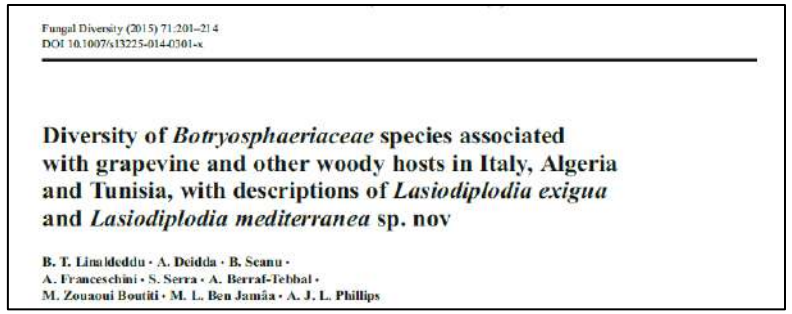
Pistacchio



Patosistema: *Botryosphaeriaceae* / Kiwi

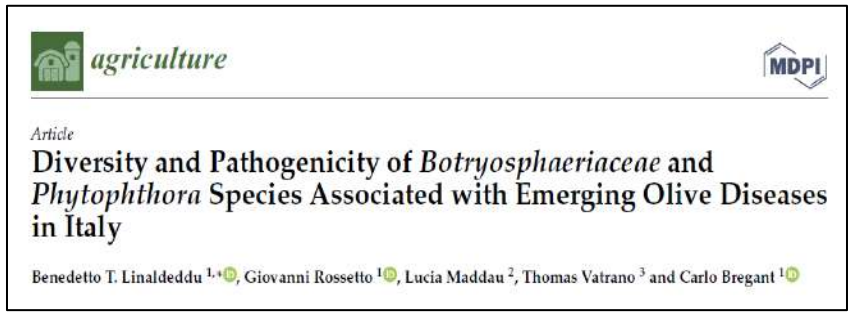
1. **Protocolli per l'ispezione e la certificazione del materiale vivaistico;**
2. **Modelli previsionali in grado di individuare i periodi ad elevato rischio di infezione;**
3. **Piano di difesa: infezioni multiple e coinfezioni (*Botryosphaeriacea*/*Phytophthora*)**

Polifagia e possibili «salti d'ospite»


Fungal Diversity (2015) 71:201–214
DOI 10.1007/s13225-014-0301-x

Diversity of *Botryosphaeriaceae* species associated with grapevine and other woody hosts in Italy, Algeria and Tunisia, with descriptions of *Lasiodiplodia exigua* and *Lasiodiplodia mediterranea* sp. nov

B. T. Linaldeddu · A. Deidda · B. Scanu · A. Franceschini · S. Serra · A. Berraf-Tebbal · M. Zouaoui Boutiti · M. L. Ben Jamâa · A. J. L. Phillips


agriculture

MDPI

Article

Diversity and Pathogenicity of *Botryosphaeriaceae* and *Phytophthora* Species Associated with Emerging Olive Diseases in Italy

Benedetto T. Linaldeddu [1,*], Giovanni Rossetto [1], Lucia Maddau [2], Thomas Vatrano [3] and Carlo Bregant [1]


agriculture

MDPI

Article

Identification and Pathogenicity of *Botryosphaeriaceae*, *Colletotrichum*, and *Phytophthora* Species Associated with Avocado Diseases in Italy

Benedetto T. Linaldeddu [1,*], Carlo Bregant [1], Jacopo Muscas [1], Lucia Maddau [2], Laura Vecchio [3], Giancarlo Polizzi [3] and Dalia Aiello [3]

Vite **Olivo** **Avocado**

GdL ACTINIDIA

Patosistema: *Botryosphaeriaceae* / Kiwi

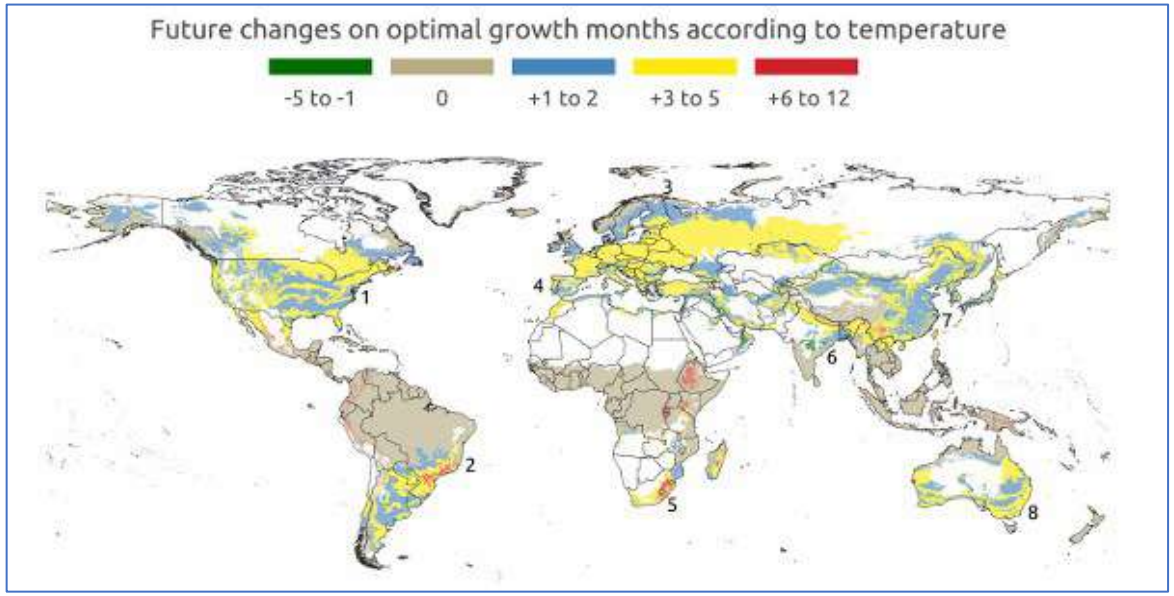
Eur J Plant Pathol (2023) 165:41–56
https://doi.org/10.1007/s10658-022-02587-7

Check for updates

Can species distribution models be used for risk assessment analyses of fungal plant pathogens? A case study with three Botryosphaeriaceae species

Eduardo Batista · Anabela Lopes · Pedro Miranda · Artur Alves

Impatto del cambiamento climatico



Le malattie da *Botryosphaeriaceae* rappresentano un chiaro esempio di come il cambiamento climatico e il commercio globale stiano riscrivendo le regole della patologia vegetale; solo adottando strategie proattive e resilienti saremo in grado di governare questa transizione

Grazie per l'attenzione

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