

()

Magnaporthe grisea

*

(// : // :)

Magnaporthe grisea

()

PDA

(Effective dose) ED₅₀

ED₅₀

ED₅₀

ED₅₀

ED₅₀

ED₅₀

%

ED₅₀

/

ED₅₀

.ED₅₀

Magnaporthe grisea :

Pyricularia grisea

(Martin & Salmon, 1930)

(*Magnaporthe grisea* Hebert) Sacc.

(Cardellina, 1988; Gulter, 1998)

(Webster & Gunne, 1992)

(Neilson *et al.*, 1977;

Emosairure & Ukeh, 1996; Jalali Sendi *et al.*, 2003;

(Al-abad, 1992; Jalali Sendi, 2003)
Al-abad *et al.*, 1993; Rao, 1994; Febry *et al.*, 1996;
Amadioha, 1998; Amadioha & Obi, 1998; Eksteen
(Dixit& Tripathi, *et al.*, 2001)
1975; Lapis & Dumancus, 1978; Pandy *et al.*, 1982;
Annapurna *et al.*, 1983; Singh, 1994; Naidu &
John, 1998)

Polyathia longifolia Sann

(*Ranunculus sceleratus* L.)

(Metcalf, 1906; Dixit& Tripathi, 1975; Lapis &
Dumancus, 1978; Annapurna *et al.*, 1983; Mason
& Mathew, 1996)

Aspergillus niger *Fusarium oxysporum* Schltdl
() *A.flavus* Link Tiegh

Xylopi aethiopia (Dunal)

(Okigbo & (*Zingiber officinale* Rosc.)

Corynespora Nmek a, 2005)

Hevea brasiliensis L. *cassicola* Wei

(*Ageratum*

Centrosema pubescene Benth. *conyzoides* L.)

(*Ocimum basilicum* *Emilia coccinea* Sweet.

(Okigbo & Nmek a, *Solanum torvum* Sw. Muell.)

Caesulia 2005)

axillaries Roxb.

Bipolaris oryzea Sawada

(Disthaporn, 1994;

.Ishinguro, 1994; Kim, 1994; Rao, 1994)

.(Okigbo & Nmek a, 2005)

(*Sambucus ebulus* L.)

(*Mellia* (*Artemisia annua* L.)

(*Polygonum persicaria* L.) *azedarach* L.)

(*Pteridium aquilinem* (L.) Kum)

(*Satureia hortensis* L.)

.(Pandy *et al.*, 1982)

Nyctanthes arbortritis L. (*Ocimum sanctum* L.)

(*Citrus limon* L.)

.(Webster & Gunnell, 1992)

(1995) Tewari

... *Magnaporthe grisea*

:

(Amadioha, 2000)

(Lin & Tsuzuki, 2003)

()

(Pandy *et al.*, 1982)

$$MGI = \frac{D_c - D_t}{D_c} \times \frac{100}{1}$$

() °C

:D_c

:D_t

°C

IA81 VCG-2

()

rpm

°C

()

/

/

(Leora)

ED₅₀

(Tewari, 1995)

/

()

(Lin & Tsuzuki, 2003)

M. grisea

M. grisea

ED₅₀

M. grisea

()

ED₇₅ ED₂₅

()

()

M. grisea

PDA

() ED₅₀

°C

ED₅₀

ED₅₀

ED₅₀

(Ishinguro, 1994)

()

ED₅₀

PDA

X ² (df)	SE±	(%) ^b	ED ₅₀ ^a (%)
/ ()	/ ± /	c	(/ /) /
/ (**)	/ ± /	(/ /) / *	(/ /) /
/ (**)	/ ± /	(/ /) /	(/ /) /
/ (**)	/ ± /	*(/ /) /	(/ /) /
/ (**)	/ ±	(/ /) / *	(/ /) /
/ (**)	/ ± /	(/ /) /	(/ /) /

() a

ED₅₀ b

ED₅₀ = % X² **

% ED₅₀ *

()

ED₅₀

ED₅₀

/ / /
()

ED₅₀

ED₅₀

ED₅₀

()

ED₅₀

M. grisea

ED₅₀

%

()

ED₅₀

/

ED₅₀

()

ED₅₀

ED₅₀

M. grisea

ED₅₀

ED₅₀

GC-MS

ED₅₀

()

ED₅₀

1. Erythritol
2. Camphor

(%)		
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) /	ED ₅₀	ED ₅₀
(/ /) /	ED ₅₀	ED ₅₀
(/ /) /	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) /	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀

% ED₅₀ *

X ² (df)	SE±	(%) ^b	ED ₅₀ ^a (%)
/ ()	/ ± /	c	(/ /) /
/ ()	/ ± /	(/ - /) /	(/ /) /
/ ()**	/ ± /	(/ - /) / *	(/ /) /
/ ()	/ ± /	(/ /) / *	(/ /) /
/ ()	/ ± /	(/ /) / *	(/ /) /
/ ()	/ ± /	(/ - /) / *	(/ /) /

() A

ED₅₀ = b

% X² **

c

% ED₅₀ *

(%)		
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) /	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) /	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀
(/ /) /	ED ₅₀	ED ₅₀
(/ /) / *	ED ₅₀	ED ₅₀

% ED₅₀ *

Amadioha

(2000)

.(Haghighian *et al.*, 2008)

ED₅₀

Colletotrichum

.(Demirci *et al.*, 2006)

()

.(Qasem & Abu-Blan, 1996)

(Sweet flag)

*(%)

(/ /) /

(/ /) /

(/ /) / *

(/ /) /

(/ /) /

(/ /) /

%

ED₅₀

*

.(Ogbebor & Adekunle, 2005)

(2003) Lin & Tsuzuki

Ocimum

(1995) Tewary .

Ophiopogon japonicas

sanctum L.

M. grisea

Ker-Gwl

M. grisea

(2007) Ogbebor *et al.*

Colletotrichum

() *gloeosporioides* (Penz). Sac.

(2000) Amadioha .

Allium) *Ocimum basilicum* L.

(*sativum* L.

in vitro

(1986) Assef *et al.* .

(Blak Boo)

Fusarium oxysporum fsp.

stami

albedinis

(Jihel)

1. Pinocarveol

... *Magnaporthe grisea*

:

O. sanctum

.(Tewary, 1995)

.(Kim, 1994)

.(Ahmadi *et al.*, 2009)

REFERENCES

1. Ahmadi, S.B., Jalali Sendi, J., Khodaparast, S. A., Ghadamyari, M., Hasanzadeh, N. & Padasht Dehkaee, F. (2009). Evaluation of some plant extracts, edifenphos and tricyclazole on the control of rice blast disease caused by *Magnaporthe grisea* Sacc. in field conditions. *Agricultural Research Water, Soil & Plant in Agriculture*. Bu-Ali Sina University. (Under publication). (In Farsi).
2. Al- Abed, A. S. (1992). *Possible antifungal effects of aqueous extracts and residues of some common wild plant species on certain plant*. M.Sc. Thesis, University of Jordan, pp. 81.
3. Al-Abed, A. S., Qasem, J. R. & Abu-Blan, H. A. (1993). Antifungal effect of some common wild plant species on certain plant pathology fungi. *Dirasat Pure & Applied Science*, 20, 149–158.
4. Assef, G. M., Assari, K. & Vincent, E. J. (1986). Occurrence of antifungal principle in the root extract of Bayoud-resistant date palm cultivar. *European Journal of Plant Pathology*, 92(1), 43-47.
5. Amadioha, A. C. (2000). Controlling rice blast *in vitro* and *in vivo* with extracts of *Azadirachta indica*. *Crop Protection*, 19, 287-290.
6. Amadioha, A. C. (1998). Control of powdery mildew of pepper (*Capsicum annum* L) by leaf extract of papaya (*Asimina triloba*). *Journal Herbs Spices Medicinal plants*, 6, 41-47.
7. Amadioha, A. C. & Obi, V. I. (1998). Fungitoxic activity of extract from *Azadirachta indica* and *Xylopiya aethiopica* on *Colletotrichum lindermuthiamum* in cowpea. *Journal Herbs Spices Medicinal plants*, 6, 33-40.
8. Annapurna, Y., Saktimtra, D. A., Iyengar, S. & Rao, U. T. (1983). Antimicrobial activity of leaf extract of *Polyalthia longifolia*. *Phytopathology Z*, 106, 183–185.
9. Cardellina, J. H. (1988). Biologically natural products in the search for new agrichemicals. In H. S. Guler, (Ed.), *Biologically Active natural products: potential use in agriculture*. (pp. 305-311). American Chemical Society, Washington.
10. Demirci, B., Baser, K. H., Tabanca, N. & Wedge, D. E. (2006). Characterization of volatile constituents of *Haplopappus greenii* and studies on the antifungal activity against phytopathogens. *Journal of Agricultural and Food Chemistry*, 54(8), 3146-3150.
11. Disthaporn, S. (1994). Current rice blast epidemics and their management in Thailand. In R. S. Zeigler, S. A. Leong & P. S. Teng (Eds.), *Rice Blast Disease*. (pp. 321–332). IRRI, Los Banos, The Philippines.
12. Dixit, S. N. & Tripathi, S. G. (1975). Fungistatic properties of some seedling extracts. *Current Science*, 64, 279-280.
13. Eksteen, D., Pretorius, J. C., Nieuwoudt, T. D. & Zietsman, P. C. (2001). Mycelial growth inhibition of plant pathogenic fungi by extracts of South African plant species. *Annals Applied Biology*, 139(2), 243-249.

14. Emosairure, S. O. & Ukeh, D. A. (1996). Field trial of neem products for the control of okra flea beetles (*Podagrica* spp) in South Eastern Igeria. *African Journal Plant Protection*, 6, 27-33.
15. Febry, W., Okemo, P. & Ansorg, R. (1996). Fungistatic and fungicidal activity of East African medical plants. *Mycoses*, 39(1), 67-70.
16. Gulter, H. G. (1998). Natural products and their potential in ariculture a personal overview. In Gulter, H.G. (Ed). *Biologically active natural products, potential use in agriculture*. (Pp.1-2). American Chemical Society, Washington.
17. Haghigian, F., Jalali Sendi, J. Aliakbar, A. & Javaherdashti, M. (2008). The growth regulatory, deterreny and ovicidal activity of worm wood (*Artemisia annua* L.) on *Tribolium confusum* Duv. and identification of its chemical constituents by GC-MS. *Pestycydy*, (1-2), 51-59.
18. Ishinguro, K. (1994). Using stimulation models of exploring better strategies for the management of blast disease in temperate rice pathosystem. In R. S. Zeigler, S. A. Leong & P. S. Teng (Eds.). *Rice Blast Disease*, (pp. 435-449) IRRI, Los Banos, The Philippines.
19. Jalali Sendi, J., Arbab, A. & Aliakbar, A. R. (2005). The efficacy of aqueous plant extracts of wormwood and dwarf elder against elm leaf beetle *Xanthogaleruca luteola* Mull. (Col.: Chrysomelidae). *Agricultural knowledge, Tabriz University*, 15(1), 115-120. (In Farsi).
20. Jalali Sendi, J., Haghigyan, F. & Aliakbar, A. R. (2003). Comparative insecticidal effect of (*Artemisia annua* L. & *Sambucus ebulus*) on *Tribolium confusum* DUV. *Iranian Journal of Agricultural science. University of Tehran*, 34(2), 313-320. (In Farsi).
21. Jorge, F., Ferreira, S., Simon, J. E. & Janick, J. (1994). Developmental studies of *Artemisia annua*: flowering and artemisinin production under greenhouse and field conditions. *Plant Medica*, 61(2), 167-170.
22. Kim, C. K. (1994). *Blast Management in high input, high yield potential, temperate rice ecosystems*. Agricultural Sciences Institute, Rural Development Administration, Suweon, Korea.
23. Lapis, D. B. & Dumancus, E. E. (1978). Fungicidal activity of crude plant extract on *Helminthosporium oryzae*. *Philippine Phytopathology*, 14, 23-27.
24. Leora Software. (1987). POLO-PC: A user guide to probit or logit analysis. LeOra Software, Berkeley, California.
25. Lin, D. & Tsuzuki, E. (2003). Effect of methanol extracts from *Ophiopogon japonicus* on rice blast fungus. *Pest Science & Management*, 28(2), 27- 28.
26. Martin, H. & Salmon, E. S. (1930). Vegetable oils as fungicides. *Nature*, 126, 58.
27. Mason, J. R. & Mathew, D. N. (1996). Evaluation of neem as a bird repellent chemical. *International Journal Pest Management*, 42(1), 47-49.
28. Metcalf, H. (1906). A preliminary report on the blast of rice, with notes on other rice disease. *Bulletin Southern Carolina Agricultural Experiment Station* , 121, 1-43.
29. Naidu, V. D. & John, V. T. (1998). In vitro inhibition of rice fungal pathogens by extracts from higher plants. *International Rice Research Newsletter*, 6, 12.
30. Neilson, J. K., Larsen, L. M. & Sorenson, H. J. (1977). Cucubitacins E and I in *Iberis amara*, feeding inhibitors for *Phyllotreta nomorum*. *Phytochemistry*, 16, 1519-1522.
31. Ogbemor, N. O. & Adekunle, A. T. (2005). Inhibition of conidial germination and mycelial growth of *Corynespora cassicola* (Berk and Curt) of rubber (*Hevea brasiliensis* Muell. Arg.) using extracts of some plants. *African Journal of Biotechnology*, 4(9), 996-1000.
32. Ogbemor, N. O., Adekunle, A. T. & Enobakhare, D. A. (2007). Inhibition of *Colletotrichum gloeosporioides* (Penz) Sacc. causal organism of rubber (*Hevea brasiliensis* Muell. Arg.) leaf spot using plant extracts. *African Journal of Biotechnology*, 6(3), 213-218.
33. Okigbo, R. N. & Nmeke, I. A. (2005). Control of yam tuber rot with leaf extracts of *Xylopiya aethiopica* and *Zingiber officinale*. *African Journal of Biotechnology*, 4(8), 804- 807.
34. Pandey, D. K., Tripathi, N. N., Tripathi, R. D. & Dixit, S. N. (1982). Fungitoxic and phytotoxic properties of essential oil of *Hyptic Saucedolens* Z. *Pflkrankh Pflschutz*, 89, 344-349.
35. Qasem, J. R. & Abu-Blan, H. A. (1996). Fungicidal activity of some common weed extracts against different plant pathogenic fungi. *Journal of Phytopathology*, 144, 157-161.
36. Rao, K. M. (1994). *Rice blast disease*. Daya Publishing House. India, 180 pp.
37. Singh, D. C. (1994). Scope of medicinal and aromatic plants in pest management. *International Symposium, Allelopathy in sustainable Agriculture, Forestry and Enviroment*, New Delhi, p. 68.
38. Tewari, S. N. (1995). *Ucimum sanctum* L., a botanical fungicide for rice blast control. *Tropical Science*, 35, 263 - 273.
39. Tewari, S. N. (1986). A new technique for bioassay of natural plant products. *Current Science*, 55, 1137-1139.
40. Tewari, S. N. & Nayak, M. (1991). Activity of four-plant leaf extracts against three fungal pathogens of rice. *Tropical Agriculture (Trinidad)*, 68, 373-375.
41. Webster, K. R. & Gunnell, P. S. (1992). *Compendium of Rice Diseases*. APS Press. St. Paul, MN. Pp. 14-18.