

()

(mating types)

Gibberella fujikuroi

*

(// : // :)

Gibberella fujikuroi

SNA

MATA-2 MATA-1 D C A
% % %
MATD-2 MATD-1 MATC-2 MATC-1
D C A
D

D

A
(*Fusarium fujikuroi*) C (*Fusarium verticillioides*)
(*Fusarium proliferatum*) D

Gibberella fujikuroi species complex :

(.)

(.)

(.)

C A () I A
D
C () ()
D A
() ()
Fusarium
G. fujikuroi ()
()

(
() ()
F. moniliforme ()
F. fujikuroi ()

(/)
PDA

MAT-2 MAT-1

/ *MAT-2 MAT-1 MAT*

((Idiomorph)

SNA ()
°C

G. fujikuroi

-
1. Section Liseola
 2. Dimictic
 3. *Gibberella fujikuroi* species complex

... (mating types)

Carrot Agar

D C A

MATC- MATC-1 MATA-2 MATA-1

MATD-2 MATD-1 2

()

° C

() D

° C

)

A

MATA-1

(A)

C

MATC-1

MATC-2

MATD-1

D

MATD-2

D C

(B)

(false-heads)

D

) C A

% A

D

% C

()

D



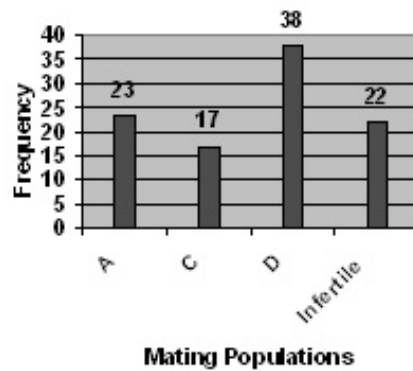
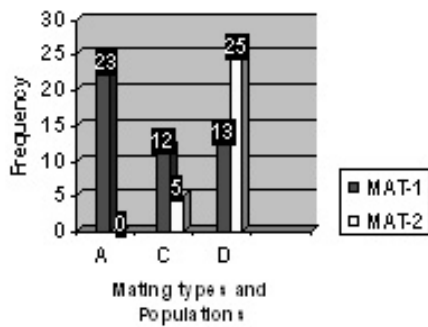
Gibberella (/ ml)

fujikuroi

جدول ۱ - وضعیت سازگاری جنسی در تعدادی جدایه *Gibberella fujikuroi* بدست آمده از بوته های آلوده برنج در مناطق مختلف استان گیلان در آزمایشگاه

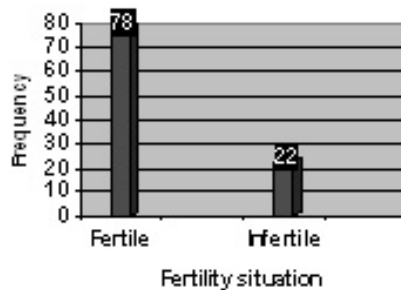
Gf-272	Gf-266	Gf-256	Gf-254	Gf-252	Gf-167	Gf-165	Gf-159	
-	+	-	-	-	-	-	-	Gf-159
-	-	-	+	-	-	-	-	Gf-165
+	-	-	-	-	-	-	-	Gf-167
-	-	+	-	-	-	-	-	Gf-252
-	-	-	-	-	-	+	-	Gf-254
-	-	-	-	+	-	-	-	Gf-256
-	-	-	-	-	-	-	+	Gf-266
-	-	-	-	-	+	-	-	Gf-272

+



شکل ۳- فراوانی الیهای *MAT-1* و *MAT-2* در جمعیت های آمیزشی *Gibberella fujikuroi* در A، C و D در جدایه های

شکل ۲- فراوانی جمعیت های آمیزشی A، C و D در جدایه های *Gibberella fujikuroi*



شکل ۴- مقایسه فراوانی جدایه های بارور (fertile) و نابارور (infertile) در جمعیت *Gibberella fujikuroi*

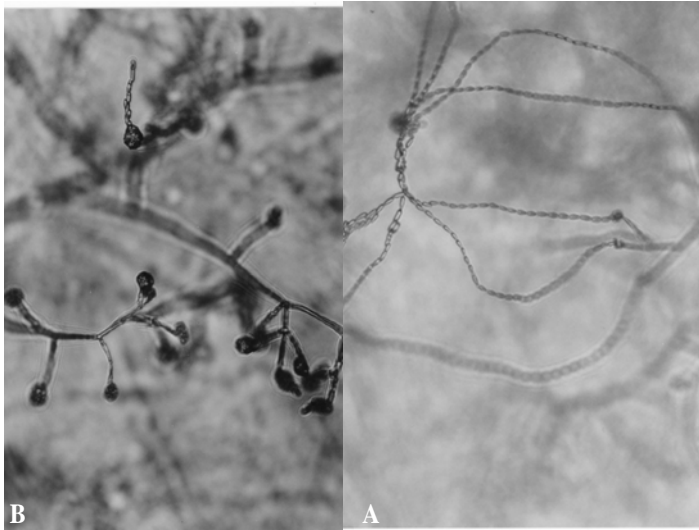
... (mating types)

:

Gibberella fujikuroi

D		C		A	
MAT ⁻²	MAT ⁻¹	MAT ⁻²	MAT ⁻¹	MAT ⁻²	MAT ⁻¹
	+				
+					
+					
	+				
	+				
+					
+					
	+				

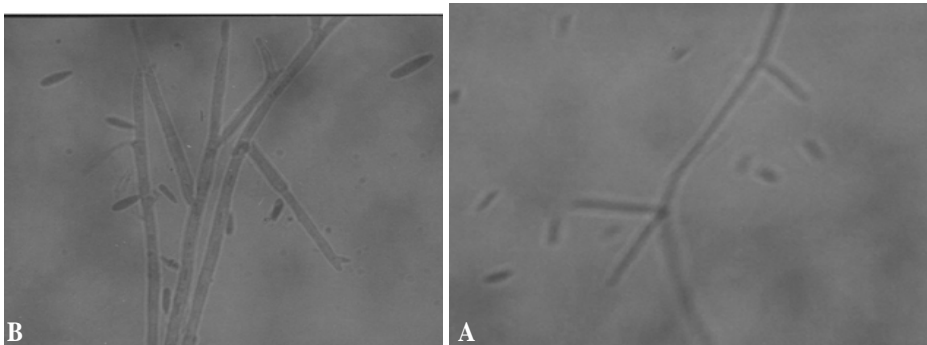
Gf-159
Gf-165
Gf-167
Gf-252
Gf-254
Gf-256
Gf-266
Gf-272



(false-heads)

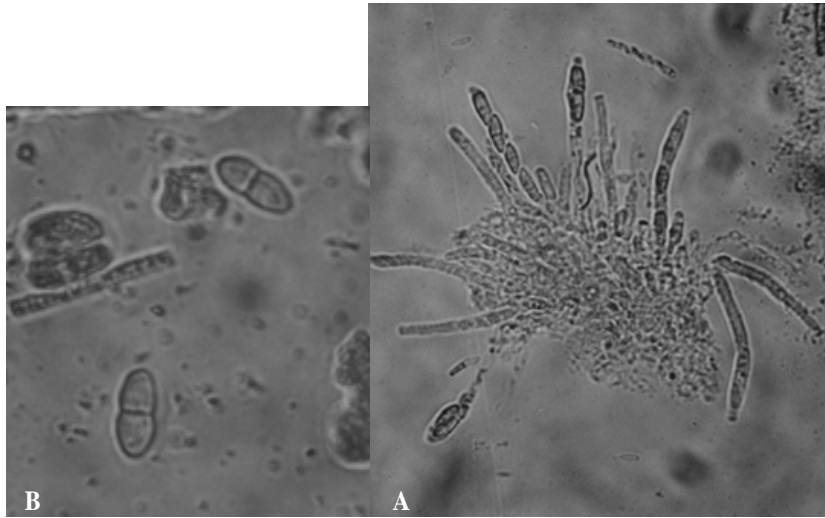
(B

(A



(B

(A. *Gibberella fujikuroi*



(A.

Gibberella fujikuroi

(B

G. fujikuroi

G. fujikuroi

()

()

G. fujikuroi

F. verticillioides

MATA-1

MATA-2

F. fujikuroi

MATC-2 *MATC-1*

... (mating types)

:

D

C A

F. fujikuroi

MATA-2 MATA-1

F. .

MATD-2 MATD-1 MATC-2 MATC-1

F. proliferatum verticillioides

%

(.)

F.

()

fujikuroi

° C

(.)

(C

) *F. fujikuroi*

(A

) *F. verticillioides*

(D

) *F. proliferatum*

D

REFERENCES

4. Anonym. 1979. Bakanae disease infection and yield loss. IRRI annual report for 1979: 173.
5. Booth, C. 1981. Perfect status (teleomorphs) of *Fusarium* species, Pp. 446 – 452. in: *Fusarium* disease, biology and taxonomy. University Park. Pennsylvania state univ. Press. 457pp
6. Desjardins, A. E. 2003. *Gibberella* from A (venaceae) to Z (eae). Annu. Rev. Phytopathology, Vol. 41: 177 – 198
7. Desjardins, A. E. , H. K. Manandhar, R. D. Plattner, G. G. Manandhar, S. M. Poling & C. M. Maragos, 2000. *Fusarium* species from Neplase rice production of mycotoxins and gibberellic acid by selected species. Applied and Environmental Microbiology, Vol. 66(3): 1020 – 1025
8. Leslie, J. F. & B. A. Summerell, 2006. Fertility concepts. Pp. 45 – 55. in: *Fusarium* laboratory manual. W. F. O. Marasas, Medical Research Council, South Africa.
9. Nelson, P. E., T. A. Toussoun & W. F. O. Marasas, 1983. *Fusarium* species. in: An Illustrated manual for identification. The Pennsylvania State University Press. Pp.128 – 141

10. Nirenberg, H. I. & W. Gerlach, 1982. Liseola section. in: The genus *Fusarium* Pp.301 – 340
11. Nirenberg, H. I. & K. O'Donnell, 1998. New *Fusarium* species and combination within the *Gibberella fujikuroi* species complex. *Mycologia*, Vol. 90(3): 434 – 458
12. Ogawa, K. 1988. Damage by bakanae disease and its chemical control. *Japan pesticide information* 52 : 13 – 17
13. Summerell, B. A., B. Salleh & J. F. Leslie, 2003. A utilitarian approach to *Fusarium* identification. *Plant. Disease*, Vol. 87(2): 117 – 128
14. Yabuta, T. & T. Hayashi, 1939. Biochemical studies on the bakanae fungus of rice. II. Isolation of gibberellin, the active principle which makes the rice seedlings grow slenderly (in Japanese). *J. Agric. Chem. soc. Japan*15 : 57–266