

**(*Hordeum vulgare* L.)**

(2011 / 11/ 21 2011/ 9 /25 )

(13)

F<sub>1</sub> : ( × )

*Alternaria alternata* : Bc<sub>2</sub> Bc<sub>1</sub> F<sub>2</sub>

*Cladosporium sp.* *Chaetomium sp.* *Aspergillus flavus* *Alternaria raphani*

*Rhizoctonia solani* *Fusarium spp.* *Candida albicans* *Cylandosporium sp.*

*.Penicillium sp.* *Staphyllum sp.* *Scytalidium sp.* *Macrophomina phaselonia*

*Penicillium sp.* *Rhizoctonia solani*

F<sub>2</sub>

**Diagnostic Study for Companion Fungi on Four Generation Grains of Barely (*Hordeum vulgare* L.)**

**Raed S. Al-Saffar**

**Nihal Y. Almurad**

*Department of Biology  
College of Science  
University of Mosul*

**ABSTRACT**

Thirteen fungal species has been recognized that associated with four generation grains from cross of barley (Beckson × Arivat), different species were reported in four generation grains (F<sub>1</sub>, F<sub>2</sub>, and back crosses Bc<sub>1</sub> and Bc<sub>2</sub>): *Alternaria alternata*, *Alternaria raphani*,

*Aspergillus flavus*, *Chaetomium sp.*, *Cladosporium sp.*, *Candida albicans*, *Fusarium spp.*, *Rhizoctonia solani*, *Staphyllum sp.*, *Penicillium sp.* . The most frequent fungus in grains of four generations was *Rhizoctonia solani* followed by *Penicillium sp.* , The F<sub>2</sub> generation was the most frequent in species, followed by Bc<sub>1</sub> and Bc<sub>2</sub> finally.

/ 7483 ( ) 43784  
(2007)  
(1987 )

(1991 )

100

.(Waines, 1989)

(1996) Abdul Wahab

(23) : (81)

(6) *Ulocladium* (7) *Penicillium* (18) *Aspergillus*

*Chaetomium, Drechslera, Curyularia* (5) *Alternaria*

*Fusarium, Cladosporium, Mucor, Rhizopus*

*Alternaria alternate, Fusarium*

(16) (Malaker and Mian, 2002) *spp.*

. %98 *Alternaria sp.*

*Helminthosporium* . %58 *Stemphylium sp.*

.....

. %38 *Fusarium sp.* %57  
(2007) .(Al – Shebel, 2003)

*Alternaria, Fusarium*

*Fusarium moniliforme, Alternaria, Ulocladium, Aspergillus*

. *flavus, A. niger, Rhizopus, Penicillium*

( ) ( ) (*Hordum vulgare L.*)

F1

F1 P1 F2

F1 P2 Bc<sub>1</sub>

Bc<sub>2</sub> Bc<sub>1</sub> F2 .(2001 ) Bc<sub>2</sub>

% 10

(9)

%20 – 15 / 200) Potato Dextrose Agar (PDA)

(3)

( %20 – 15  
° 25

needle

(1983 )

(13)

: .(Bc<sub>2</sub> Bc<sub>1</sub> F<sub>2</sub> F<sub>1</sub> )

*Chaetomium sp. Aspergillus flavus Alternaria raphani Alternaria alternata*

*Rhizoctonia Fusarium spp. Candida albicans Cylandosporium sp. Cladosporium sp.*

.*Penicillium sp. Staphyllium sp. Scytalidium sp. Macrophomina phaselonia solani*

(1) (1)

*Penicillium sp. R. solani*

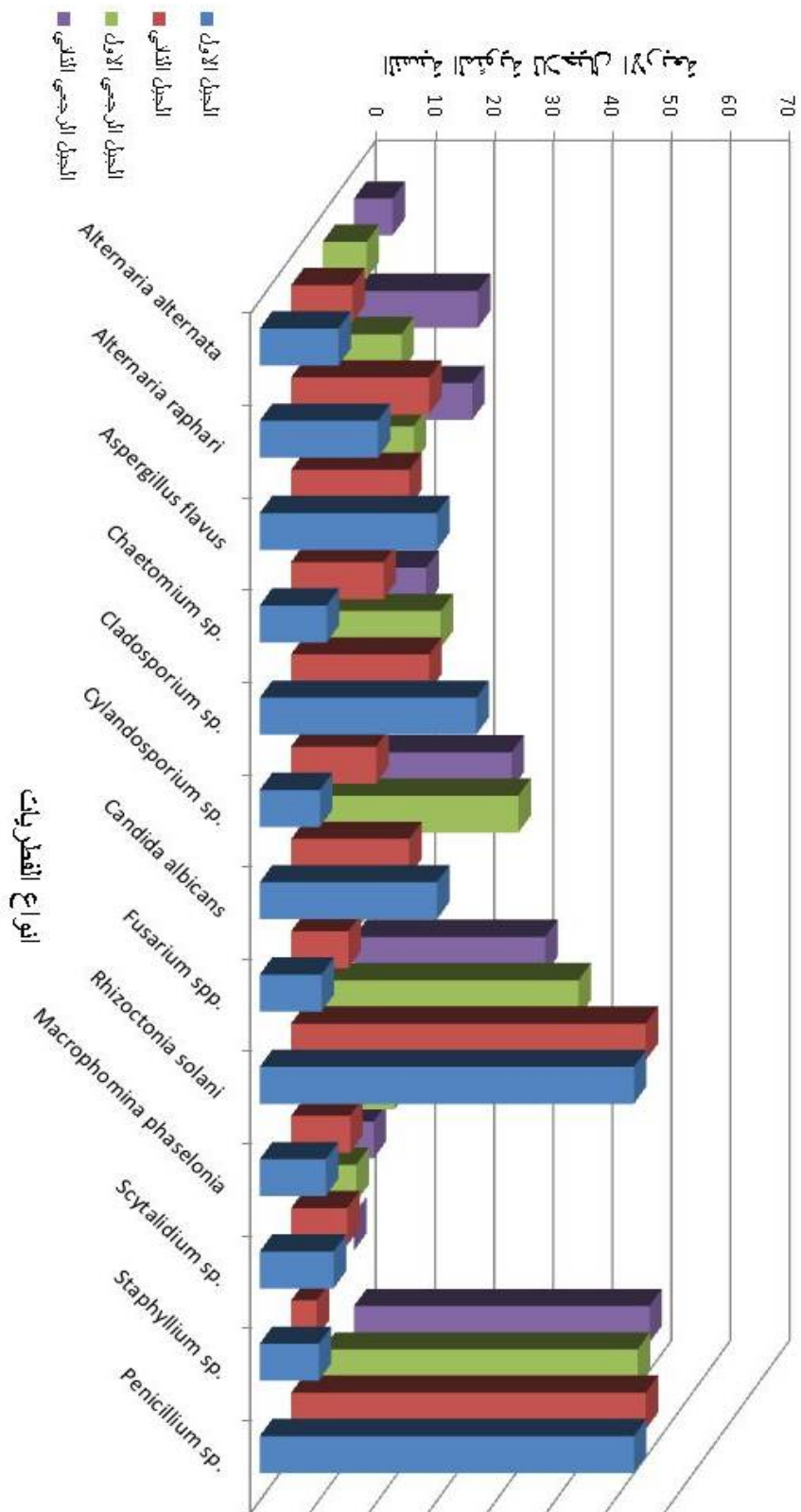
%63.33

.(2007 ) (Fakhrunnisa, *et al.*, 2006) (Al-Shebel, 2003) (Abdul Wahab, 1996)

:1

%Bc <sub>2</sub>	%Bc <sub>1</sub>	% F2	% F1	
6.54 ed	7.45 d	10.35c	13.33 cd	<i>Alternaria alternata</i>
21 bcd	13.35 cd	23.33 b	20 bcd	<i>Alternaria raphani</i>
20 bcd	15.44 c	20 bc	30 bc	<i>Aspergillus flavus</i>
0 e	5.67d	15.66 bc	11.35 cd	<i>Chaetomium sp.</i>
12.25 cde	20 c	23.37 b	36.66 b	<i>Cladosporium sp.</i>
4.97 e	10 cd	14.40 bc	10.20 cd	<i>Cylandosporium sp.</i>
26.66 bc	33.15 b	20 bc	30 bc	<i>Candida albicans</i>
4.45 e	6.45 d	9.70c	10.47 cd	<i>Fusarium spp.</i>
32.37 b	43.33ab	60 a	63.33 a	<i>Rhizoctonia solani</i>
10 de	12.23 cd	10 bc	11.20 cd	<i>Macrophomina phaselonia</i>
3.33 e	5.72 d	9.50c	12.52 ed	<i>Scytalidium sp.</i>
0 e	0 e	4.33 d	10 cd	<i>Staphyllum sp.</i>
50 a	53.33 a	60 a	63.33 a	<i>Penicillium sp.</i>
<b>14.73</b>	<b>17.39</b>	<b>26.20</b>	<b>24.79</b>	

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شكل (١) النسبة المئوية لأنواع الفطريات المصاحبة لحبوب الشعير في الأجيال الأربعة المستخدمة

و

*R. solani*

sclerotia

*Penicillium sp.* .(1981 )

(1995 )

*Fusarium spp. Alternaria alternata* .(2005 )

*Scytalidium sp. Macrophomina phaseolina*

%10.35 %13.33

*Alternaria alternata*

*Fusarium* %6.54

%7.45

%4.55 %6.45

%9.70

%10.47

%10 (%11.20)

*Macrophomina phaseolina*

%12.52 *Scytalidium sp.* .(%10) %12.23

%.%3.33

%5.72

%9.5

) (2004 ) (2000 ) (Abdul wahab, 1996)

*Staphyllum sp. Chaetomium sp.* .(2005

*Penicillium sp. Rhizoctonia solani*

*Rhizoctonia solani*

F<sub>1</sub>

*Candida Cladosporium sp.*

%63.33

*Penicillium sp.*

F<sub>2</sub>

*Aspergillus flavus albicans*

*Penicillium sp. R. solani*

*Penicillium sp. R. solani*

Bc<sub>1</sub>

(Mather and Jinks, 1982) F<sub>2</sub>

F<sub>1</sub>

( )

F<sub>1</sub>

F<sub>1</sub>

Bc<sub>2</sub>

*Staphyllum sp.*

Bc<sub>2</sub> Bc<sub>1</sub> F<sub>2</sub> F<sub>1</sub>

.( )

.....

%24.79

.%14.73

(2006 )

(2004 )

%17.39

( )

.(2002 )

.(2007)

.(2001)

. Hordinm vulgarel

.(1991)

.187-179 (1)23

Paul Neer .(1995) ( )

925

.(2007)

.(1987)

.(2004)

.(

*Sorghum Bicolor* .(1983)

.(1981)

Bc<sub>2</sub>

Gaard

- 334 . (2000)
- .(2005)
- .(2002)
- 91 (3)3 .
- .95
- .(2004)
- .94-89 (4)5 .
- .(2006)
- .189-178 (9)17

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