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(// : // :)

(*Bacillus subtilis*)
(*G.etunicatum* *G.mosseae* *Glomus intraradices*)

/ *G.intraradices*

/

()

Bacillus subtilis

G.intraradices *G.etunicatum*

:

(Khan *et al.*, 2008)

(Hayman, 1982)

(Akhtar and Siddiqui, 2008)

(Schweiger *et al.*, 2001)

(Bethlenfalvey

(Al-

et al., 1997; Al - Garni, 2006)

Garni, 2006)

(Aggarwal *et al.*, 2005)

Glomus mosseae (Nicol. and Gerd.) Gerdmann and

Trappe

(Turk *et al.*, 2006)

Groth and Martinson (Sutton and Sheppard, 1976)
(1983)

(Abdel-Fattah, 1997)

/

/ mg/kg

maryamseafy@yahoo.com :

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(Schreiner

and Bethlanfalvey, 1997)

(Menge,1982)

(Samarbakhsh *et al.*, 2009)

Bacillus Ehrenberg

subtilis

(Xiao *et al.*, 2008)

(F₂) (F₁) (F₀)
(F₃)

(Vivas *et al.*, 2003)

(M₀)

Glomus etunicatum Beker and Gerdemann (M₂)

B.subtilis

G. mosseae (Nicol. and Gerd.)Gerdmann and Trappe(M₁)

G.intraradices Schenk and Smith (M₃)

G.mosseae

cm

(Vivas *et al.*, 2003)

/

pH= /

%

B.subtilis

(Alavi and Ahonmanesh, 1997)

/

(Fotovat, 2007)

(Rejali, 2010)

J.sheld

Fusarium moniliforme

TERI

)

(Ag⁺)

(Lubick, 2008)

(F₁)

Bacillus

(F₃)

(Rostami and

(F₂)

subtilis

Shahsavari, 2009)

(

) L

ppm

(Giovannetti and Mosse, 1980)

/

cm

(*Bradyrhizobium*

japonicum)

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()

)

()

(

SAS

(Board, 2008)

KOH

Atm

KOH

($P < /$)

($P < /$)

/)

($P < /$)

(

($P < /$)

(Philips and Hyman, 1970)

()

($P < /$)

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% C.V

: ns ***

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G.intraradices

G.etunicatum *G.mosseae*

G.etunicatum

G.intraradices

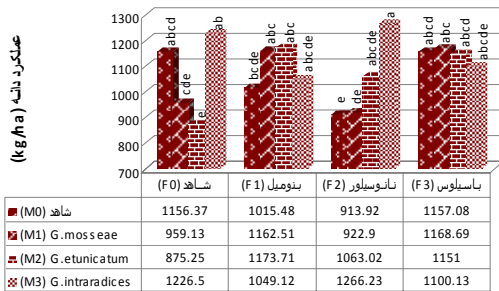
(Johnson

et al., 1992)

G.mosseae

G.etunicatum *G.mosseae*

G.intraradices



(Carr and Hinkly, 1985; Dodd and Jeffries, 1989; Carey
Bacillus subtilis *et al.*, 1992)

G.etunicatum *G.mosseae*

() (

()

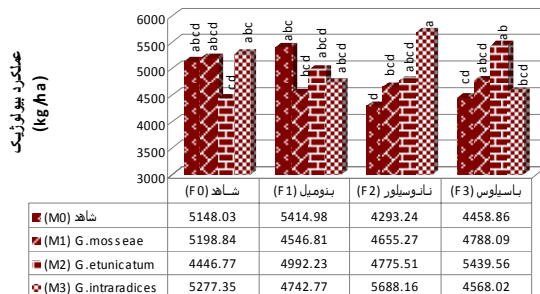
G.intraradices

(Vivas

(Mishra, 2004)

et al., 2003)

G.etunicatum



G.mosseae

G.intraradices

G.etunicatum *G.mosseae*

B. subtilis

G.intraradices

(Xiao *et al.*, 2008)

G.etunicatum

B.subtilis

()

G.etunicatum *G.mosseae*

G.intraradices

G.intraradices

G.etunicatum *G.mosseae*

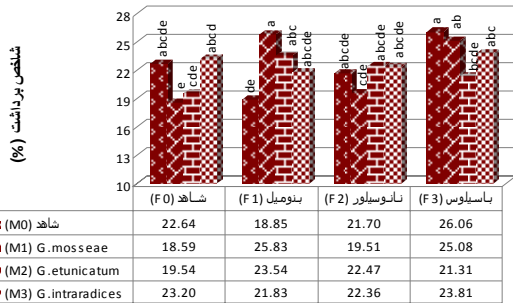
Bacillus subtilis

G.etunicatum

(Schonwitz and Zigler, 1988)

G.mosseae

B.subtilis



(Vivas et al., 2003)

G.etunicatum

Bacillus subtilis

G.mosseae

Bertoldi

(2001) Schweiger et al., (1997) et al.,

(Hale and Sanders, 1982)

G.etunicatum *G.intraradices*

G.mosseae

G.intraradices

()

G.intraradices

B.subtilis

G.mosseae

G.etunicatum

G.intraradices

B.subtilis

()

(

G.mosseae

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G.mosseae

(/)

() ()

G.etunicatum

Carey *et al.*,)

(1992

Bacillus

G.etunicatum

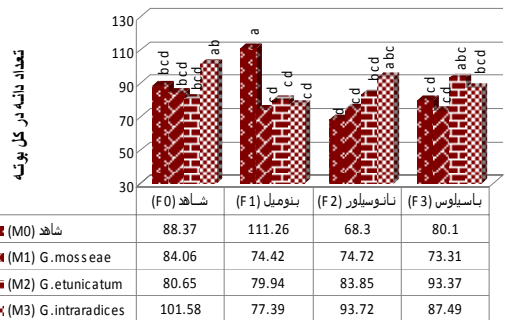
subtilis

G.mosseae

)

(*B.subtilis*)

G.intraradices



()

G.intraradices

G.mosseae

G.etunicatum

G.etunicatum

G.mosseae

G.intraradices

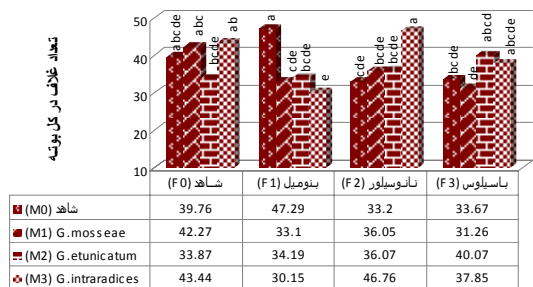
(2005) Tufenkci *et al.*,

(1995) Subramanian

(M₀)

G.etunicatum

G.mosseae



G.mosseae *G.etunicatum*

G.intraradices

/

(Boucher *et al.*, 1999)

G.intraradices

G.intraradices

(Ocampo *et al.*, 1980)

G.intraradices

G.intraradices

pH

()

B.subtilis

/ (F₀)

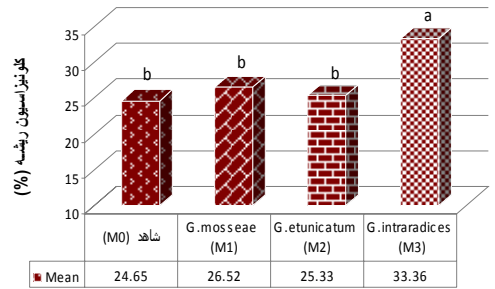
G.intraradices

(Samarbakhsh *et*

al., 2009 ; Aggarwal *et al.*, 2006)

G.etunicatum *G.mosseae*

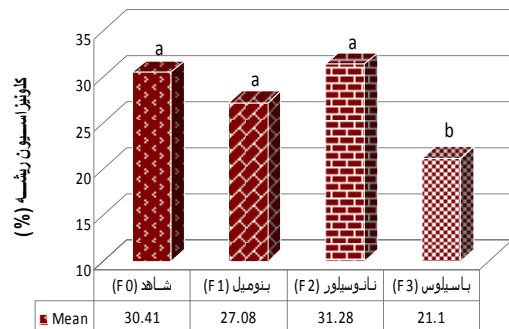
(F₀)



Bacillus

subtilis

G.etunicatum *G.intraradices*



G.etunicatum *G.mosseae*

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