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(*Zea mays* L. SC. 704)

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Glomus intraradices (AM)

Pseudomonas fluorescens (Pf)

AM+Pf

Pf AM

AM

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AM+Pf

(A

AM+Pf

AM+Pf

Pf

AM

AM AM+Pf

AM+Pf

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.(Kantwa & Meena, 2002)

.(Prikryl et al., 1985)

.(Nagahashi et al., 1996)

.(Sharma, 2002)

(*Phaseolus* (*Triticum aestivum* L.)
(*Brassica napus* L.) (*Mungo* L.)
(*Lens culinaris* L.) (*Pisum sativum* L.)
(*Medicago sativa* L.)

Penicillium bilaji

(Asea & Frankenberger,

.(Varma & Hock, 1999)

.1988; Kucy, 1987; Kucey & Leggett, 1989)

(1999) Espelta et al.

(1999) Whitelaw et al.

Penicillium radicum

Citrus sp.

Glomus intraradices

Subramanian &

(1999) Charest

.(Salehrastin, 2001)

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(Arpana et al.,

(*Brassica nigra* L.)

.2002)

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(Gaur et al.,
 A .2004; Lucy et al., 2004; Toro et al., 1997)
 (Asea et al., 1988) (*Zea mays* L.)
 A)
 A)
) ((Imam, 2003)
) ()
 (Pf) (*Pseudomonas fluorescens* strain 93)
 (AM) (*Glomus intraradices*)
 (AM+Pf)()

Pseudomonas fluorescens strain 93

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Glomus intraradices

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pH = / /

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- 1. Perlite
 - 2. Apatite

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(Somasegaran & Hoben, 1994)

(1982) Kormanik & McGraw

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SAS

(Malakouti & Ghibi, 1998)

LSD

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AM+Pf

AM AM+Pf

AM AM+Pf

Pf

(Allen et al., 1974)

(1954) Olsen et al.

Pf

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AM AM+Pf

SPAD

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(A)

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/ a	/ a	/ a	/ a	/ a	+	
/ ab	/ abc	/ abc	/ ab	/ bc	+	
/ ab	/ abcd	/ abcd	/ abc	/ bcd	+	
/ a	/ ab	/ ab	/ ab	/ abc	+	+
/ cd	/ fg	/ fgh	/ de	/ cd	+	
/ bc	/ abcdef	/ bcdef	/ abcde	/ ab	+	
/ ab	/ abcde	/ abcde	/ abcd	/ bcd	+	
/ bc	/ cdefg	/ bcdefg	/ bcde	/ bcd	+	
/ ab	/ abcd	/ abcde	/ abc	/ bc	+	+
/ d	/ fg	/ gh	/ e	/ d	+	
/ cd	/ efg	/ efgh	/ cde	/ abc	+	
/ bcd	/ defg	/ defgh	/ cde	/ bcd	+	
/ cd	/ efg	/ efgh	/ cde	/ bcd	+	
/ bc	/ defg	/ cdefgh	/ bcde	/ bcd	+	+
/ d	/ g	/ h	/ e	/ cd	+	

LSD

AM AM+Pf

AM AM+Pf

(1997) Subramanian et al.

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(P≤0.05) (AM) (Pf)

()

()

(P≤0.05))

AM AM+Pf ()

()

Pf (A AM AM + Pf

AM + Pf

AM

AM+Pf ()

/	**	/	**	/	n.s	/	**	/	**
/	**	/	**	/	**	/	**	/	**
/	**	/	**	/	**	/	**	/	**
/	n.s	/	n.s	/	n.s	/	n.s	/	n.s
/		/		/		/		/	

a

x

b

n.s

**

/	n.s	/	**	/	**	/	**
/	n.s	/	**	/	**	/	**
/	**	/	**	/	**	/	**
/	n.s	/	**	/	n.s	/	**
/		/		/		/	

a

x

b

n.s

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...	:	AM	AM + Pf
	()	AM+Pf	
Pf	AM		AM+Pf
	AM		AM+Pf
()		AM+Pf	
AM+Pf		AM	(Niemira et al., 1995)
AM	AM+Pf		Pf
	()		(Prikrýl et al., 1985)
			(Azcon et al., 1991)
AM	AM+Pf		
			(Arshad & Frankenberger, 1991)
			(Martens & Frankenberger, 1994)
AM + Pf	AM	AM + Pf	
			(1994) Leinhos
		($P \leq 0.05$)	
AM			<hr/> 1. Asparagine 2. Alanine 3. Lysine 4. Tryptophan aminotransferase

(A)

()	()	()	()	()	()
/ a	/ a	/ a	/ a	/ a	+
/ ab	/ abc	a	/ ab	/ abc	+
/ ab	/ abcd	/ a	/ abc	/ abcd	+
/ ab	/ ab	/ a	/ ab	/ ab	+ +
/ abcd	/ f	/ a	/ def	/ ef	+
/ abcd	/ abcd	/ a	/ bcdef	/ def	+
/ abcd	/ abcd	/ a	/ abcde	/ cde	+
/ abcd	/ bcd	/ a	/ bcdef	/ def	+
/ abc	/ abcd	/ a	/ abcd	/ abcd	+ +
/ bcd	/ f	/ a	/ ef	/ ef	+
/ cd	/ ef	/ a	/ ef	/ ef	+
/ abcd	/ de	/ a	/ cdef	/ def	+
/ abcd	/ ef	/ a	/ cdef	/ def	+
/ abcd	/ cde	/ a	/ cdef	/ def	+ +
/ d	/ f	/ a	/ f	/ f	+

LSD

AM AM + Pf

AM AM+Pf

AM+Pf ()

Pf

()

()

AM AM + Pf

AM+Pf

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Pf

AM

(Subramanian et al., 1997)

AM+Pf

AM

AM+Pf

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() /

(Boln et al., 1987)

(AM+Pf

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(SPAD Value)					
(A)		
/ ab	/ ab	/ ab	/ abc	/ abc	+
/ a	/ a	/ a	/ ab	/ ab	+
/ ab	/ abc	/ ab	/ abc	/ abc	+
/ a	/ a	/ a	/ a	/ a	+
/ bcd	/ d	/ de	/ ef	/ cd	+
/ abc	/ bcd	/ bcd	/ abcd	/ abc	+
/ abc	/ bcd	/ bcd	/ abcd	/ abc	+
/ abcd	/ bcd	/ cde	/ bcde	/ abc	+
abc	/ abc	/ abc	/ abc	/ abc	+
/ cd	/ d	/ e	/ ef	/ cd	+
bcd	/ d	/ de	/ def	/ bcd	+
/ abcd	/ cd	/ cde	/ cde	/ abcd	+
/ abcd	/ d	/ de	/ cdef	/ abcd	+
/ abcd	/ bcd	/ cde	/ bcde	/ abc	+
/ d	/ d	/ e	/ f	/ d	+

LSD

(A)					
()		(mg/kg)	()		()	()		()		()	
/ e	/ d	/ a	/ ab	/ a	/ a	/ a	/ a	/ a	/ a	/ a	+
/ ab	/ b	/ a	/ ab	/ a	/ a	/ a	/ a	/ a	/ a	/ a	+
/ bcd	/ cd	/ a	/ ab	/ ab	/ ab	/ ab	/ ab	/ ab	/ ab	/ ab	+
/ a	/ a	/ a	/ a	/ a	/ a	/ a	/ a	/ a	/ a	/ a	+
/ e	/ f	/ b	/ cde	/ cd	/ cd	/ cd	/ cd	/ cd	/ cd	/ cd	+
/ e	/ e	/ b	/ ab	/ bc	/ bc	/ bc	/ bc	/ bc	/ bc	/ bc	+
/ abc	/ bc	/ a	/ ab	/ ab	/ ab	/ ab	/ ab	/ ab	/ ab	/ ab	+
/ cde	/ d	/ b	/ ab	/ bc	/ bc	/ bc	/ bc	/ bc	/ bc	/ bc	+
/ abc	/ b	/ a	/ ab	/ ab	/ ab	/ ab	/ ab	/ ab	/ ab	/ ab	+
/ e	/ g	/ b	/ ef	/ cd	/ cd	/ cd	/ cd	/ cd	/ cd	/ cd	+
/ e	/ ef	/ b	/ ef	/ cd	/ cd	/ cd	/ cd	/ cd	/ cd	/ cd	+
/ bcd	/ e	/ b	/ bcd	/ bcd	/ bcd	/ bcd	/ bcd	/ bcd	/ bcd	/ bcd	+
/ cd	/ e	/ b	/ de	/ cd	/ cd	/ cd	/ cd	/ cd	/ cd	/ cd	+
/ bcd	/ e	/ b	/ bc	/ bc	/ bc	/ bc	/ bc	/ bc	/ bc	/ bc	+
/ e	/ g	/ b	/ f	/ d	/ d	/ d	/ d	/ d	/ d	/ d	+

LSD

Glomus fasciculatum

(1993) Sylvia et al.

AM+Pf

(Shaharoon et al., 2006) ACC

AMF

Pf

(2006) Roesti et al.

(Subramanian et al., 2006)

Pf

AM AM+Pf

()

AM+Pf

(P≤0.05)

AM+Pf

(P≤0.05)

AM AM+Pf

() Pf

(Zaidi & Khan, 2005)

(Zaidi & Khan, 2005)

AM+Pf

(Imam, 2003)

()

AM AM+Pf

(P≤0.05)

AM+Pf

(/)

Glomus intraradices

Pseudomonas fluorescens

()

AM+Pf

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