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(c)

(1987) Powelson et al.

(Asadirahmani et al., 2007)

(Asadirahmani et al., 2007)

(Asadirahmani et al.,

.2007)

()

.(Doran, 1980)

.(Handayanto and Cadish, 1995)

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, ()

(1986) Haynes .(1998

.(Asadirahmani et al., 2007)

()

(2004) Noorbakhsh

.(Haynes, 1986)

Constantinides and Fownes (1995) Vigil and Kissel

(1990) Fox et al. . (1994)

(+)

($r^2 = /$)

.(Fox et al., 1990)

(CO₂)

pH

()

.(Besharati, 2000)

Lakziyan

.(Noorbakhsh, 2004)

(2007) and Yazadanpanah

(Kalbasi et al.,

.1988)

pH

.(Raiesi, 2006)

.(Raiesi, 2006)

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.(Raiesi, 2006)

(

(1997) Chapman .(Chapman, 1997)

(1998) Raiesi

CO₂

Raiesi,)

(Oven-drying)

%

(Haynes, 1986)

%

/ %

(Chapman, 1997)

% = % × %

()

(Acid-Detergent Fiber) ADF

(Neutral-Detergent Fiber) NDF (1963) Van Soest

(1976) Van Soest and Wine

()

()

()

(w/w)

)

(

()

(*Thiobacillus*

thiooxidans)

%

()

±

±

) (:) pH (:)

()

(

()

(1982) Anderson

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()

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(

(Black, 1982 ;Black et al., 1965)

)

(

(Jones, 2001)

()

/

()

UV7500
(Alef

/
NaOH

NaOH

BaCO₃

.and Nannipieri, 1995)

$$mgCO_2 - C = (B - S) \times N \times E$$

()

()

()

: B

SAS

:S

LSD

:N

(C CO₂)

:E

()

()

C/N

(Alef and Nannipieri, 1995)

C/N

()

(:)

SO ₄ ²⁻ -S (ppm)	OM ()	C/N	OC ()	N ()	P (ppm)	EC (:)	pH (:)	CaCO ₃ ()	()	()	()
/	/	/	/	/	/	/	/	Clay loam	/	/	/

()	(L+Ce)/N	L/N	(L) ()	(H) ()	(Ce) ()	C/N	C ()	N ()
/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/
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()

/ % / % / % / % / % / %

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> > > > > >
()

(Zeng et

al., 2010 ;Raiesi, 2006)

(F)					
NMR	CMR	N _{min}	C _{min}	df	
/	**	***	**	***	
/	n.s	***	/	n.s	***
/	n.s	/	***	/	n.s

=n.s, P < 0.001=***, P < 0.01=**, P < 0.05 = *

CMR

N_{min}
NMR

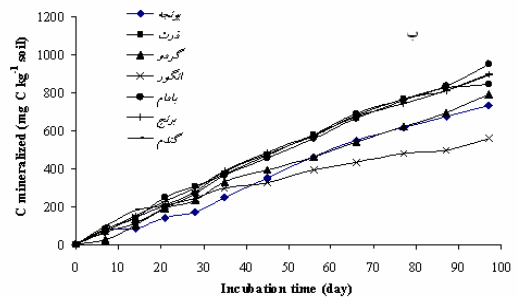
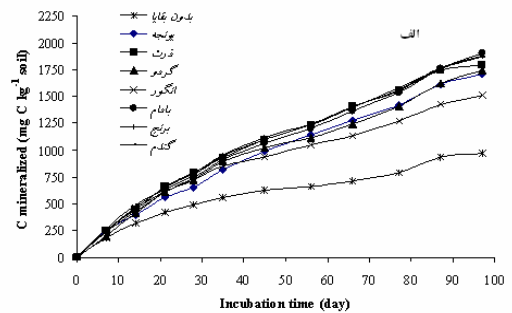
C_{min}

(Noorbakhsh, 2004)

()

(2006) Raiesi

(2007) Bertrand et al.



() ()

(C_{min})

()

(P < /)

mg C/kg

mg C/kg

()

CO₂-C

/ %

(n=)

NMR		CMR		N_{min}	C_{min}
(mg N kg ⁻¹ day ⁻¹)		(mg C kg ⁻¹ day ⁻¹)		(mg N kg ⁻¹)	(mg C kg ⁻¹)
/	AB	/	G	AB	G
/	A	/	F	A	F
/	D	/	A	D	A
/	BCD	/	D	BCD	D
/	BC	/	B	BC	B
/	CD	/	C	CD	C
/	BC	/	B	BC	B
/	ABC	/	E	ABC	E
/		/		/	LSD _(/)
/	A	/	C	A	C
/	A	/	B	A	B
/	A	/	A	A	A
/		/		/	LSD _(/)

NMR

CMR

N_{min}

C_{min}

(LSD)

()

()

pH

($P < /$)

()

pH

pH

pH

(pH)

/ % / %

(Speir et al. 1999)

()

x

($P < /$)

()

(1997) Chapman

()

()

()

()

/ % / % / % / % / % / %

/ %

/ % / % / % / % / % / %

/ %

(2006) Singh et al. .

(/ %)

()

(/ %)

()

/ % / % / % / % / %

/ % / %

()

(/ %)

($P < /$)

(/ %)

()

() ×

/ % / %

()

C/N

()

($P < /$)^x

()

(CMR)

(/)

(/)

(Carbon mineralization rate) CMR

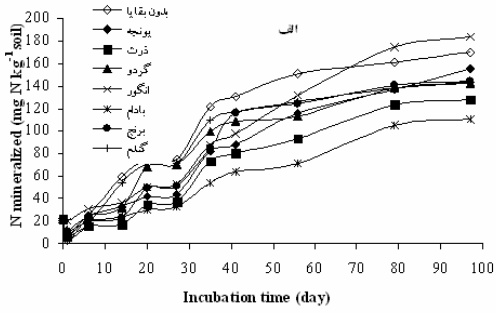
()

($P < /$)

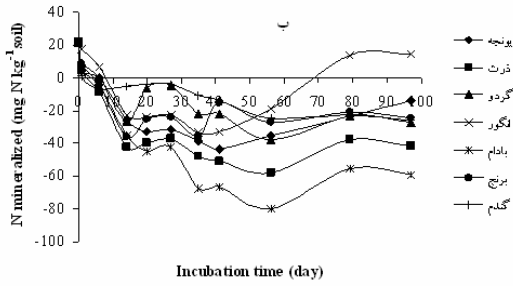
/ mg C kg⁻¹day⁻¹

/ mg C kg⁻¹day⁻¹

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% % % % % % %



/ % / % / % / %

/ % / % / %

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()

(/ %)

(/ %)

/ mg/kg

/ mg/kg

()

/ % / % / % / %

/ % / % / %

()

(/ %)

(/ %)

> > > > > >

() ()

()

()

()

.(Raiesi, 2006)

(N_{min})

()

()

(P = /)

N_{min}

> > > > > > >

()

()

(P= /)

pH pH

pH

()

×

()

(P= /)

(NMR)

C/N

(Nitrogen mineralization rate)

C/N

C/N

De Neve and

(1996) Hofman

()

C/N=

C/N=

C/N=

NMR

(P = /)

(De

C/N

.Neve and Hofman, 1996)

(2003) Salardini

/ /

C/N

(Salardini, 2003)

C/N

/ % / % / %

/ % / % / %

C/N

(2006) Singh et al.

/ %

()

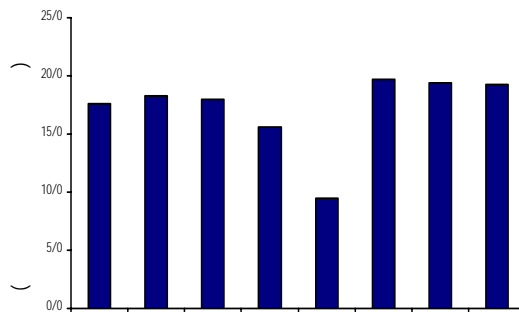
(2006) Flavel and Murphy

(Flavel

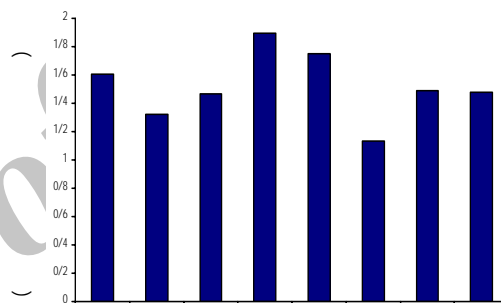
(1981) Saggat et al. and Murphy, 2006)

()

\times (P= /)
(P= /)



(n=)



(n=)

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