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(2010) Nobakht et al .

.(Kaul et al., 2009)

(Ussiri et

(Sequestration)

.al., 2006)

/

(2009) Khormali et al., .(Post and Kwon, 2000)

.(Jandl et al., 2007)

(Davidson et al.,

Ayoubi et al.,

1998; Epron et al., 2004; Cantú et al., 2010)

(2011)

(Luo and Zhou, 2006, Liu et al., 2008)

(Bouma and Bryla, 2000)

emoghiseh@nrcam.org :

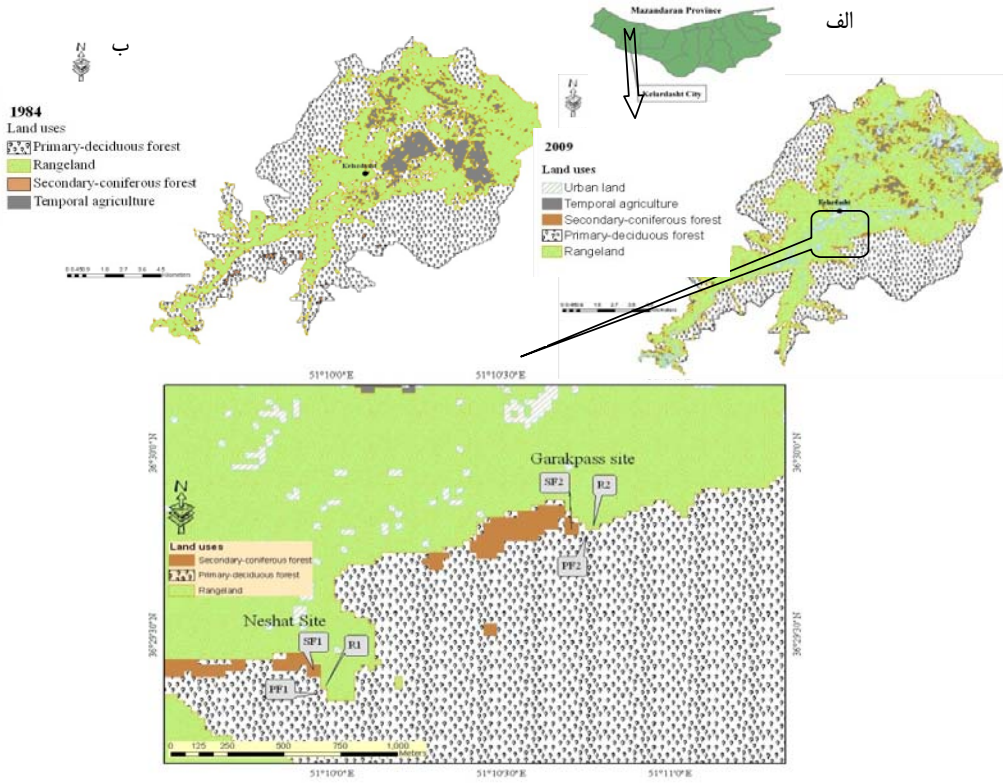
*

()

(FRWOI,

.2008)

.(Saei, 1942)



(Secondary-coniferous forest (SF))

(Primary-deciduous forest (PF))

: (Rangelands(R))

(Temporal agriculture)

(Urban land (UL))

.(Banaei, 1998)

.(ROWR, 2006)

.(Pourmajidian, 1991)

()

'*Fagus orientalis*'

Mesic Typic Xeric

...

()

'Picea abies'

(PF₁)

(R₁)

PF₁

(SF₁)

Graminea spp.

(Pourmajidian, 1991; Khodabakhsh, 1997)

(DEM)

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TM

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(SF)

(PF)

(NRCS,

B₃

B₂

B₁

AB

A

O

USDA., 2002)

(UL)

(R)

(TA)

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		()
Very fine, mixed, active, mesic, Aquic Palexeralfs	PF ₁	515110.17E, 4038148.97N
Clayey-skeletal, mixed, active, mesic, Calcic Pachic Haploxerolls	SF ₁	515063.14E, 4038159.59N ()
Very fine, mixed, active, mesic, Typic Haploxerolls	R ₁	514994.87E, 4038258.19N
Very fine, mixed, active, mesic, Typic Haprendolls	PF ₂	516032.54E, 4038998.52N
Very fine, mixed, active, mesic, Pachic Haploxerolls	SF ₂	515967.31E, 4039136.57N ()
Very fine, mixed, active, mesic, Typic Haploxeralfs	R ₂	516077.19E, 403913.88N

ρ_b

(%)

SOC (m)

d (Mg m⁻³)

()

B

(Ussiri et al., 2006)

Mg C ha⁻¹ cm⁻¹

(NRCS, USDA., 2004)

()

()

(EC)

()

(pH)

Luo and)

() ()

)

()

(Zhou, 2006; Hopkins, 2008

(pH:8.2

()

CO₂ in trap (mol C) =

0.5 × ((V_{NaOH} × C_{NaOH}/1000) - (V_{HCl} × C_{HCl}/1000))

(Soil Survey Staff, 2010)

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()

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Soil Respiration Rate (mol C/ha.h)=

(CO₂ in trap(sample)-CO₂ in trap(blank))/
(Respiration time(h)×area(ha))

Mg ha⁻¹ SOC_(each horizon) =
% SOC × ρ_b × d × 10⁴

()

$^{-1}\text{kg C ha}^{-1}\text{ month}$

(ANOVA)

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(SF) (PF)

(TA)

(R)

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/ / /

($P < 0.05$)

LSD

/ / /

(Ussiri et .

SPSS(ver.16.0)

()

/

()

.al., 2006)

()

*BSP %	C/N	TN **	TN %	OC **	*CCE %	OC %	*BD (Mg/m ³)	EC (dS/m)	pH			
/	a		/	b		***	/	a			PF ₁	
/	b		/	b		/	b				SF ₁	
/	b		/	a		/	a				AR ₁	
/	a	/	a	/	aa	<	/	b	/	b	PF ₁	
/	b	/	a	/	ab	/	a	/	b	/	SF ₁	
											O	
/	a	/	a	/	aa	/	b	/	a	/	b	PF ₁
/	a	/	a	/	aa	/	a	/	b	/	a	SF ₁
/	b	/	a	/	ba	/	b	/	b	/	a	AR ₁
/	a	/	a	/	aa	/	b	/	a	/	c	PF ₁
/	b	/	a	/	aa	/	a	/	ab	/	a	SF ₁
/	c	/	a	/	ba	/	b	/	b	/	a	AR ₁
/		/		****	/	ba	/	b	/	b	/	PF ₁
/		/			/	aa	/	a	/	a	/	SF ₁
/		/			/	aa	/	b	/	a	/	AR ₁
/		/			/	ba	/	b	/	b	/	PF ₁
/		/			/	ab	/	a	/	a	/	SF ₁
/		/			/	aa	/	b	/	a	/	AR ₁
/		/			/	aa	/	b	/	a	/	PF ₁
/		/			/	aa	/	a	/	a	/	SF ₁
/		/			/	ba	/	b	/	b	/	AR ₁

*** Mg ha⁻¹ cm⁻¹

(TN)

(OC)

** (BSP)

(CCE)

(BD)

*

(Bold)

**** (P>0.05)

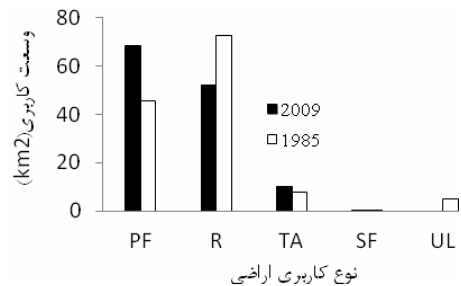
%

(UL)

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B_{k2} B_{l2} B_{k1} B_{l1} $(P < 0.05)$
 pH $(P < 0.05)$
 $(P < 0.05)$
 B_{k3} AB $(P < 0.05)$
 B_{k3} AB A - "O"
 B_{k1} - C/N
 $(P < 0.05)$ B_{w1} AB A O
 cm $(P < 0.05)$
 /) $(MgCha^{-1} cm^{-1})$
 .(

*BSP %	C/N	TN **	TN %	OC **	*CCE %	OC %	*BD (Mg/m ³)	EC (dS/m)	pH	
/ c			/ a			*** / b				PF ₂
/ b			/ ab			/ a				SF ₂
/ a			/ b			/ a				AR ₂
/ b	/ a	/ a	/ a	/ bb	/ a	/ b	/ a	/ a	/ b	PF ₂
/ a	/ a	/ a	/ a	/ aa	/ b	/ a	/ b	/ b	/ a	SF ₂ O
/	/ a	/ a	/ a	/ bb	/ a	/ b	/ b	/ a	/ b	PF ₂
/	/ b	/ ab	/ ab	/ ab	/ a	/ a	/ c	/ a	/ b	SF ₂ A
/	/ a	/ b	/ b	/ cb	< / a	/ c	/ a	/ b	/ a	AR ₂
/	/ a	/ a	/ a	/ ab	/ a	/ a	/ b	/ a	/ b	PF ₂
/	/ a	/ a	/ a	/ ab	/ a	/ a	/ b	/ a	/ b	SF ₂ AB
/	/ b	/ a	/ a	/ bb	< / a	/ b	/ a	/ a	/ a	AR ₂
/	/	/	/ ****	/ bb	/ a	/ b	/ a	/ a	/ a	PF ₂ B _{k1}
/	/	/	/	/ ab	/ b	/ a	/ bc	/ a	/ b	SF ₂ B _{w1}
/	/	/	/	/ ab	< / b	/ a	/ c	/ a	/ a	AR ₂ B _{w1}
/	/	/	/	/ bb	/ a	/ b	/ a	/ a	/ a	PF ₂ B _{k2}
/	/	/	/	/ aa	/ b	/ a	/ b	/ a	/ b	SF ₂ B _{w2}
/	/	/	/	/ bb	< / b	/ ab	/ a	/ a	/ a	AR ₂ B _{w2}
/	/	/	/	/ ab	/ a	/ a	/ a	/ a	/ a	PF ₂ B _{k3}
/	/	/	/	/ ab	/ b	/ a	/ a	/ a	/ a	SF ₂ B _{k1}
/	/	/	/	/ ba	< / c	/ b	/ a	/ a	/ a	AR ₂ B _{l1}

Mg ha⁻¹ cm⁻¹ (TN) (OC) ** (BSP) (CCE) (BD) :*
 : (Bold) :***
 :**** (P>0.05) %
 / () /
 () - (/ /)
 (P<0.01 r=0.76)
 (R²=0.73) .()

$r=0.79, 0.70, 0.82;$) (R^2) $r=0.50$) $(P<0.01 \quad r=0.64)$ $(P<0.05$
 $r = - 0.80, -0.81;)$ $(P<0.01$) $(P<0.05 \quad r=- 0.56, -0.50)$)
 $(r= -0.52; P<0.05)$ $(P<0.01$) $(r= -0.62, P<0.01)$)
 (R^2)) (R^2))
 .())

(kg C ha ⁻¹ Month ⁻¹)					
R ₂	SF ₂	PF ₂	R ₁	SF ₁	PF ₁
/ Ea	/ Ea	/ Ea	/ Ec	/ Db	* / Ea
/ Ba	/ Cb	/ Ba	/ Ba	/ Bc	/ Cb
/ Aa	/ Ba	/ Aa	/ Ab	/ Ac	/ Aa
/ Cb	/ Aa	/ Cb	/ Bb	/ Bc	/ Ba
/ Db	/ Dab	/ Da	/ Ca	/ Ba	/ Db
/ Eb	/ Ea	/ Ea	/ Da	/ Ca	/ Fb
/ ca	/ aa	/ ba	/ ab	/ bb	/ ab

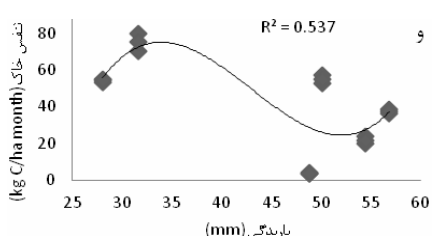
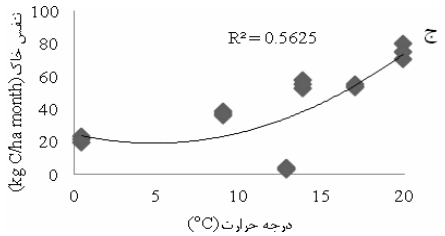
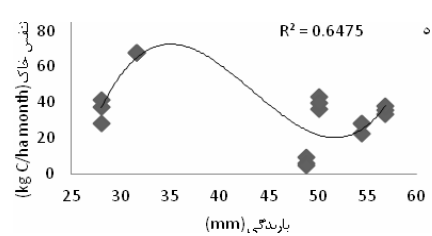
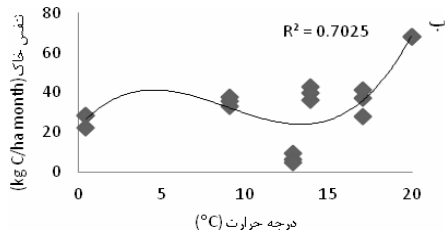
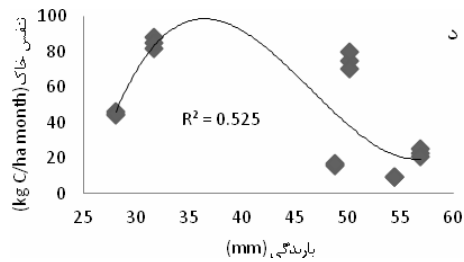
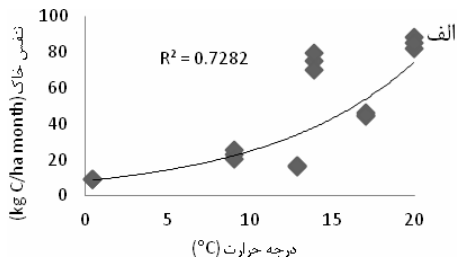
(a)

(A)

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:(Bold)

(P>0.05)



(Foth,

() 1990; Bohn et al., 2001)

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(

(2002)Wear

(2002) Lantz et al.

()

(Binkley, 1995)

(SF₁)

(pH)

()

(PF₁)

C/N

)

(PF₂)

(SF₁)

(

(Foth,

()

C/N

pH

1990)

()

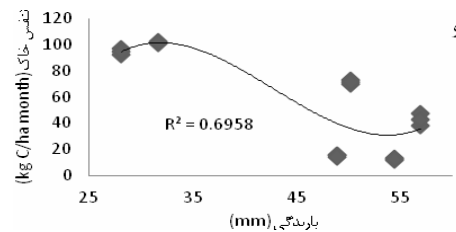
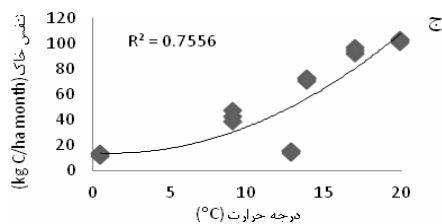
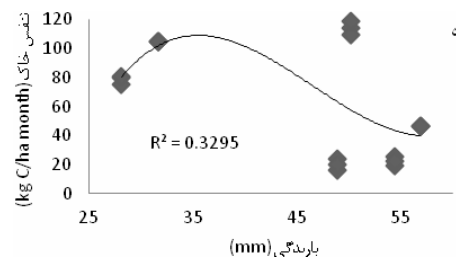
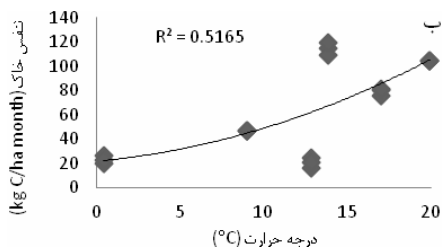
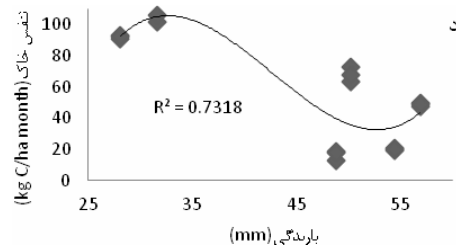
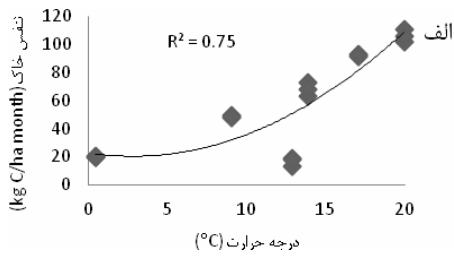
(Bouajila and Gallali, 2008)

H⁺

()

()

C/N



C/N

(Pourmajidian, 1991)

C/N

.()

(2006) Ussiri et al.,
(B_{w1} & B_{w2})

.(Falk et al., 2005)

Lantz et al., (P<0.05)
(2002)

(Epron et al., 2004; Iqbal et al., 2009; Schaufler et al., 2010)

(Trumbore et al., 1995)

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% /

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(/)

(/) % / (P<0.05)

(Wang &

cm (P>0.05)

.Fang2009; Schaufler et al., 2010)

(O)

C/N

Liu et

(2004) Powers

(2007) al.,

:

/

Raich and

SF₂>PF₂> R₂> PF₁> R₁>SF₁

/ (% /)

(2000) Tufekcioglu

cm (% /)

%

.()

)

(Hutsch, 1998)

(

(Pedersen and

.Bille-Hansen, 1999;Arai & Tokuchi, 2010)

.(Raich and Tufekcioglu, 2000)

.()

%

)

Lundegårdh

()

(Martin et al., 2010)

(1927)

()

C_{CO2}/ C_{SOC}

.(Lal, 2002)

/

.()

/

/

/

/

/

C/N

()

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