

CH₄ CO₂

*

تاریخ دریافت: ۸۶/۷/۱۵ تاریخ پذیرش: ۸۷/۳/۲۵

چکیده

CH₄ CO₂

CH₄

CH₄

CH₄

CO₂

CH₄ CO₂

N₂O CH₄ CO₂

(Tan, et al., 2005)

CO₂

()

/ ppm

ppm

CO₂

CO₂ (Houghton, et al., 1996)

CO₂

()

(Rees, et al., 2005)

CO₂

(Borken, et al., 1999)

(N₂O)

(Lal and

Kimble, 1995)

CH₄ CO₂

/ ppm /

()

(Neue, et al., 1995)

(Bouwman,1990)

48° 28' 59"

48° 27' 50"

31° 14' 1"

31° 13' 45"

(IRRI, 2002)

(Ehhalt and Smith, 1978)

()

()

()

CH₄ CO₂

ppm

UNICAM

Excel

SPSS 10

Duncan

Wang, 2003)

(Grahammer et Beyer, 1991; Gupta and Singh, 1987; al., (1991;

() .() %

()

.()

:()

(

) (()	
**	b -۰,۱۰۶۴	a ۲,۲۲۲۱	CH ₄ (mg/m ² /day)
**	b ۰,۵۱۰۰	a ۰,۹۹۹۶	CO ₂ (g/m ² /day)

** معنی دار در سطح ۱٪

CO₂ // () // //

:()

	//	//	//	//	//	//	//	//	
**	/	/	/	/	/	/	/	/	CH ₄
	c	c	bc	bc	a	ab	bc	bc	
**	/	/	/	/	/	/	/	/	CO ₂
	a	ab	b	a	e	d	d	c	

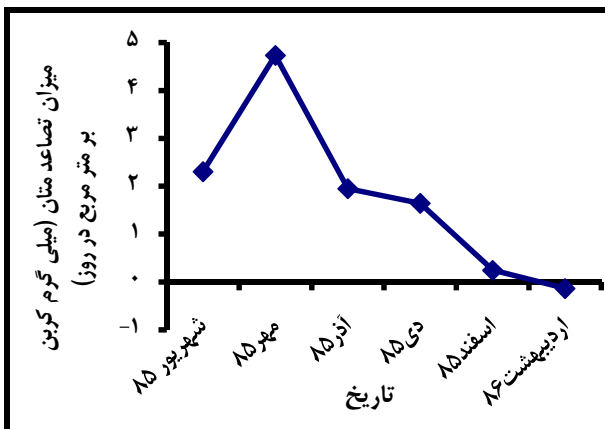
** معنی دار در سطح ۱٪

:()

(Jiang, et al., 2006)

:()

/ Wassmann Pathak .



:()

:()

(Xu, et ; Ueki, et al., 1997 ; Jiang, et al., 2006)

al., 2002

()

CO₂
CO₂

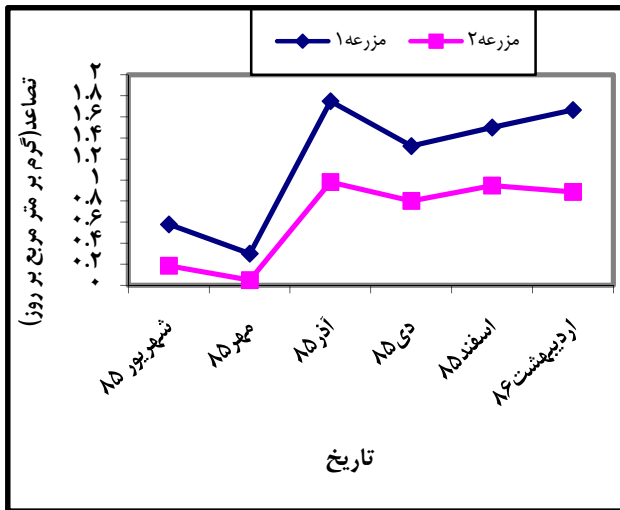
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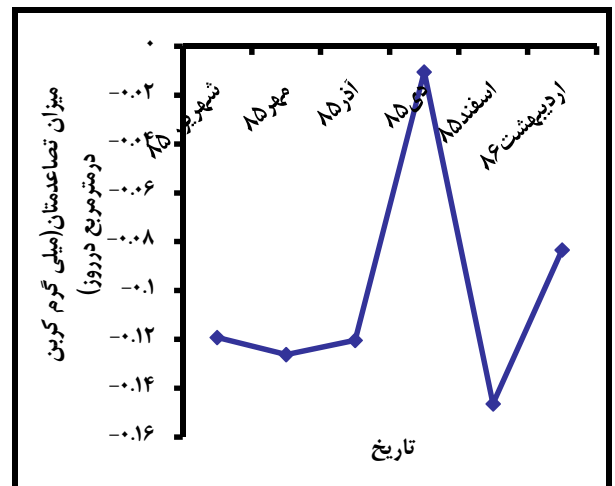
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(

CO₂



CO₂ : ()



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CO₂

CO₂

CO₂

CO₂

CO₂

Dugas & Mielnick

1998

Davidson

2000

CO₂

همچنین Lafleur (2005) در بررسی اکوسیستم‌های گیاهی،
رابطه مستقیمی بین تصاعد CO₂ و دمای محیط یافته و این
موضوع را مربوط به تأثیر دما بر تنفس اکوسیستم دانسته است.

CO₂

1- Static Chamber

2- Gas Chromatograph

()

.DNDC

Borken, W., et al. 1999. A Climate Change Scenario for Carbon Dioxide and Dissolved Organic Carbon Fluxes from a Temperate Forest Soil: Drought and Rewetting Effects. *Soil Science Society of American Journal*. 63:1848–1855.

Bouwman, A.F. 1990. *Soil and The Greenhouse Effect: Proceeding Of International Conference on Soil and the Greenhouse Effect*. Wily, Wiltshire.,UK.

Davidson, E.A., Ebelk, R.D., Boone. 1998. Soil water content and temperature as independent or confounded factors controlling soil respiration in a temperate mixed hardwood forest. *Global Change Biology*. 4: 217–227.

Ehhalt, D.H. and U., Schmidt. 1978. Sources and sinks of atmospheric methane. *pageoph*. 116:452-464.

Houghton, J.T. et al. 1996. *Climate Change 1995. The Science of Climate Change*. Cambridge University Press, Cambridge, UK.

IRRI (International Rice Research Institute), Riceweb. 2002. <http://www.riceweb.org/>.

Jiang, C., et al. 2006. Methane and Nitrous Oxide Emissions from Three Paddy Rice Based Cultivation Systems in Southwest China. *Advances in Atmospheric Sciences*, 23: 415–424.

Lafleur, P.M., et al. 2005. Ecosystem Respiration in a Cool Temperate Bog Depends on Peat Temperature but not Water Table. *Ecosystems* 8: 619–629.

Lal, R. and J., Kimble. 1995. Soils and Global Change, in: *Advances in Soil Science*. CRC Press, Boca Raton FL, USA, pp. 1–2.

Mielnick, P.C., W.A., Dugas. 2000. Soil CO₂ Flux in a Tallgrass Prairie. *Soil Biology & Biochemistry* 32: 221-228.

Neue, H.U., R., Wassmann, and R.S., Lantin. 1995. Mitigation Options for Methane Emissions from Rice Fields. pp. 136-144, In, Peng S., K. Ingram, H. U. Neue, L. Ziska, Eds. *Climate change and rice*. Springer-Verlag, Berlin.

Pathak, h., Li, C., and Wassmann, R. 2005. Greenhouse Gas Emissions from Indian Rice Fields: Calibration and Upscaling Using the DNDC Model. *Biogeosciences Discussions*, 2: 77–102.

Rees, R.M., et al. 2005. The Role of Plants and Land Management in Sequestering Soil Carbon in Temperate arable and Grassland Ecosystems. *Soil Science Society of American Journal*, 56(1):125-132.

Tan, Z., Lal, R. 2005. Carbon Sequestration Potential Estimates with Changes in Land Use and Tillage Practice in Ohio, USA. *Agriculture, Ecosystems and Environment*, 126:113-121.

Ueki,A., et al.1997. Survival of Methanogens in Air-dried Paddy Field Soil and their Heat Tolerance. *Water Science and Technology*, 36: 517–522.

Xu,H., Z.C.,Cai, and Z.J.,Jia.2002. Effect of Soil Water Contents in the Non-rice Growth Season on CH₄ Emissionduring the Following Rice-Growing Period. *Nutrient Cycling in Agroecosystems*, 64: 101–110.